The Gas Fitter's responsibility starts at the:

Select one:
a.
inlet side of the service regulator

b.
inlet side of the meter

c.
outlet of the meter

d.
outlet side of the service regulator

Feedback

Your answer is incorrect.

The correct answer is: outlet of the meter

Question text

Which one of the following must sign the notification of installation or alteration, (call for inspection), the:

Select one:
a.
authorized agent for the gas contractor

b.
general contractor, or their registered representative

c.
gas contractor

d.
gas fitter

Feedback

Your answer is correct.

The correct answer is: gas fitter

Question text

Where gas is leaking from any part of a gas utility supply system containing gas, a gas fitter shall immediately:

Select one:
a.
rope off the area and notify the gas company to make the necessary repairs

b.
all of the options

c.
dial 911 and evacuate all residents in that area

d.
extinguish all flames and sources of ignition in the vicinity of the installation

Feedback

Your answer is incorrect.

The correct answer is: all of the options

Question text

A domestic appliance service license was once classified as what class of license?

Select one:
A

B

C

D

Feedback

Your answer is correct.

11 Gas & Safety Regulations

The correct answer is: C

Question text

An applicant for a Class "A" Gas Fitter's license shall have held a Class "B" Gas Fitter's license for a period of:

Select one:
a.
6 months

b.
2 years

c.
5 years

d.
1 year

Feedback

Your answer is correct.

The correct answer is: 2 years

Question text

The limitation of a ***Class "B"*** license, for gas pressures in a gas system is:

Select one:
a.
60 PSIG (400 kPa)

b.
no limitation on gas pressure

c.
5 PSIG (35 kPa)

d.
up to and including 2 PSIG (15 kPa)

Feedback

Your answer is incorrect.

The correct answer is: no limitation on gas pressure

Question text

A Class "B" Gas Fitter's license shall entitle the holder, while employed by a gas contractor, to install and alter:

Select one:
a.
any gas system

b.
power burner units up to and including 400,000 Btu/h (117 kW)

c.
approved appliances with draft hoods up to and including 750,000 Btu/h (220 kW)

d.
any approved atmospheric appliances with draft hoods, with no limitations on input

Feedback

Your answer is incorrect.

The correct answer is: power burner units up to and including 400,000 Btu/h (117 kW)

Question text

At the completion of the installation of a gas system, the gas fitter must leave a gas fitter's tag on the gas pipe at the point of entry into the building. The information included on this tag shall include which of the following items?

Select one:

a.
The gas fitter's name, date and certificate of qualification number

b.
The gas fitter's name, date, certificate of qualification number and type of appliance

c.
The gas fitter's name and date

d.
The gas fitter's name, date and phone number

Feedback

Your answer is correct.

The correct answer is: The gas fitter's name, date, certificate of qualification number and type of appliance

Question text

Which of the following abbreviations does not represent an agency approved as a gas appliance testing and certification agency for B.C.?

Select one:
a.
CGA

b.
ULC

c.
UL

d.
CSA

Feedback

Your answer is correct.

The correct answer is: CGA

Question text

Before installing an approved used gas appliance, it must be inspected and determined to be safe by:

Select one:
a.
a gas fitter

b.
a testing agency

c.
a gas inspector

d.
an appliance supplier

Feedback

Your answer is incorrect.

The correct answer is: a gas fitter

Question text

To be a gas contractor requires the applicant to:

Select one:
a.
have a current business license

b.
employ a Class "A" gas fitter

c.
first be a gas fitter himself/herself

d.
provide proof of a performance bond

Feedback

Your answer is incorrect.

The correct answer is: provide proof of a performance bond

Question text

A person who connects gas to an appliance shall:

Select one:
a.
all of the options

b.
inform user of correct operation

c.
ensure appliances work according to manufacturer's specifications

d.
verify inputs and make any necessary adjustments

Feedback

Your answer is correct.

The correct answer is: all of the options

Question text

Who may not apply for a permit to install gas appliances?

Select one:

a.
A gas fitter

b.
A farmer to do his/her own gas fitting in their home

c.
A homeowner to do his/her own gas fitting in their home

d.
A gas fitter/contractor

Feedback

Your answer is incorrect.

The correct answer is: A gas fitter

Question text

Who is responsible for maintaining gas-fired appliances in a rental suite?

Select one:

a.
The janitor of the building

b.
The tenant of the building

c.
The manager of the building

d.
The owner of the building

Feedback

Your answer is correct.

The correct answer is: The owner of the building

Question text

To convert a propane appliance to natural gas, the installer must:

Select one:

a.
be a Class "A" gas fitter

b.
have it inspected before it can be used

c.
first request permission from the safety manager

d.
follow manufacturer's instructions for the conversion

Feedback

Your answer is correct.

The correct answer is: follow manufacturer's instructions for the conversion

Question text

The limits of flammability of propane gas in air are approximately:

Select one:
a.
2.4% to 9.5%

b.
4.6% to 14%

c.
10% to 45%

d.
5% to 15.3%

Feedback

Your answer is correct.

The correct answer is: 2.4% to 9.5%

Question text

Name the limits of flammability for natural gas in air:

Select one:
a.
14% to 24%

b.
4% to 14%

c.
6% to 12%

d.
4% to 10%

Feedback

Your answer is correct.

The correct answer is: 4% to 14%

Question text

Natural gas is composed mainly of:

Select one:
a.
methane

b.
propane

c.
butane

d.
mixture of air and gas

Feedback

Your answer is correct.

The correct answer is: methane

Question text

The relative density of propane vapour is approximately:

Select one:
a.
0.6

b.
1.5

c.
2

d.
0.8

Feedback

Your answer is correct.

The correct answer is: 1.5

Question text

What is the calorific value of Butane gas?

Select one:

a.
1200 Btu/Cu.Ft. (0.352 kW/cu.ft)

b.
2500 Btu/Cu.Ft. (0.733 kW/cu.ft)

c.
1050 Btu/Cu.Ft. (0.308 kW/cu.ft)

d.
3200 Btu/Cu.Ft. (0.938 kW/cu.ft)

Feedback

Your answer is correct.

The correct answer is: 3200 Btu/Cu.Ft. (0.938 kW/cu.ft)

Question text

What surface on a propane storage container transfers heat and affects the vaporization rate?

Select one:
a.
The entire wetted surface of the container

b.
Only the surface that directly faces the sun and receives direct radiation

c.
The entire surface not including the top or bottom

d.
The entire surface including the top and bottom

Feedback

Your answer is incorrect.

The correct answer is: The entire wetted surface of the container

Question text

One cubic foot of natural gas at standard temperature and pressure will produce how many kW of heat when it is completely burned?

Select one:
a.
10.35 kW

b.
0.293 kW

c.

2520 kW

d.
1,000 kW

Feedback

Your answer is incorrect.

The correct answer is: 0.293 kW

Question text

One cubic foot of propane vapor will produce approximately how many kW when completely burned?

Select one:
a.
35 310 kW

b.
88 980 kW

c.
0.7323 kW

d.
26kW

Feedback

Your answer is incorrect.

The correct answer is: 0.7323 kW

Question text

The heat generated by the complete combustion of a unit of fuel is commonly referred to as its:

Select one:
a.
flash value

b.
combustion value

c.
calorific value

d.
distillation value

Feedback

Your answer is correct.

The correct answer is: calorific value

Question text

Which of the following gases has the highest calorific value?

Select one:
a.
Natural Gas

b.
Butane

c.
Propane

d.
Carbon Monoxide

Feedback

Your answer is correct.

The correct answer is: Butane

Question text

One cubic meter of propane vapor will produce:

Select one:
a.
35 310 Btu

b.
88 275 Btu

c.
25 000 Btu

d.
112 992 Btu

Feedback

Your answer is incorrect.

The correct answer is: 88 275 Btu

Question text

Absolute pressure is equal to:

Select one:
a.
the atmospheric pressure multiplied by the gauge pressure

b.
the atmospheric pressure plus the gauge pressure

c.
the gauge pressure minus the atmospheric pressure

d.
the atmospheric pressure divided by the gauge pressure

Feedback

Your answer is incorrect.

The correct answer is: the atmospheric pressure plus the gauge pressure

Question text

Natural gas must be preheated to approximately ____ °F before it will ignite.

Select one:
a.
212

b.
1000

c.
1200

d.
3500

Feedback

Your answer is incorrect.

The correct answer is: 1200

Question text

The flame temperature of natural gas is approximately ________°F.

Select one:
a.
1200

b.
3500

c.
212

d.
1000

Feedback

Your answer is correct.

The correct answer is: 3500

Question text

The chemical formula for natural gas is:

Select one:

a.
C_3H_8

b.
C_2H_6

c.
CH_4

d.
C_4H_{10}

Feedback

Your answer is correct.

The correct answer is: CH_4

Question text

The chemical formula for propane gas is:

Select one:

a.
CH_4

b.
C_2H_6

c.
C_4H_{10}

d.
C_3H_8

Feedback

Your answer is correct.

The correct answer is: C_3H_8

Question text

Complete combustion of 5 cubic feet of propane gas would produce ________ kW of heat.

Select one:

a.
1.46

b.
12 500

c.
26

d.
3.66

Feedback

Your answer is correct.

(5 cu.ft X 2500 BTU/cu.ft) ÷ 3412

The correct answer is: 3.66

Question text

20 imperial gallons of liquid propane would weigh ____ pounds.

Select one:
a.
100

b.
200

c.
10

d.
20

Feedback

Your answer is correct.

20IMP X 10 lbs/IMP of H_2O X 0.51 (specific gravity of LP)

The correct answer is: 100

Question text

1 cubic meter of liquid propane would yield how many Btu's?

Select one:
a.
675 000

b.
23 834 250

c.
2 500

d.
88 275

Feedback

Your answer is incorrect.

1 cu.m liquid = 270 cu.m vapor

270 cu.m **X** 35.31 cu.ft/cu.m **X** 2500 BTU/cu.ft

The correct answer is: 23 834 250

Question text

The calorific value (heat value) of natural gas is approximately:

Select one:
a.
1,000 Btu/cu.ft (1 0.34 kW/m3)

b.
2,500 Btu/cu.ft (25.86 kW/m3)

c.
500 Btu/cu.ft (5.17 kW/m3)

d.
3,200 Btu/cu.ft 3 (33.1 kW/m3)

Feedback

Your answer is correct.

The correct answer is: 1,000 Btu/cu.ft (1 0.34 kW/m3)

Question text

One cubic meter of natural gas will produce _______ BTU

Select one:
a.
37.075

b.
35 310

c.
35.310

d.
37 075

Feedback

Your answer is incorrect.

The correct answer is: 35 310

Question text

A piping system is pressure tested with air to 50 PSIG. The volume of the piping is 100 cu.ft and the temperature of the air in the pipe is 78F. The next day the temperature of the air in the pipe is 45F. What will the new pressure gauge reading be?

Select one:
a.
27.5 psig

b.
60.76 psig

c.
84.32 psig

d.
46.03 psig

Feedback

Your answer is correct.

The correct answer is: 46.03 psig

Question text

The specific gravity of a gas is the:

Select one:
a.
heat in the gas

b.
volume of the gas

c.
weight of a gas as compared to an equal volume of air

d.
weight of a gas as compared to an equal volume of water

Feedback

Your answer is correct.

The correct answer is: weight of a gas as compared to an equal volume of air

Question text

Which part of air is involved in the combustion process?

Select one:
a.
Carbon Dioxide

b.
Nitrogen

c.
Oxygen

d.
Moisture content

Feedback

Your answer is incorrect.

The correct answer is: Oxygen

Question text

A primary cause of incomplete combustion when the appliance is firing at the correct input is:

Select one:
a.
too much air

b.
lack of air

c.
lack of gas

d.
too much gas

Feedback

Your answer is incorrect.

The correct answer is: lack of air

Question text

The identifying products of incomplete combustion are:

Select one:
a.
carbon monoxide & aldehydes

b.
heat, carbon monoxide and water vapor

c.

heat, carbon dioxide, carbon monoxide and nitrogen

d.
heat, carbon dioxide and carbon monoxide

Feedback

Your answer is incorrect.

The correct answer is: carbon monoxide & aldehydes

Question text

How many cubic feet of combustion air are required for every cubic foot of propane gas?

Select one:
a.
16 Cu.Ft. (0.45 m3)

b.
25 Cu. Ft. (0.71 m3)

c.
32 Cu.Ft. (0.91 m3)

d.
10 Cu.Ft. (0.28 m3)

Feedback

Your answer is correct.

The correct answer is: 25 Cu. Ft. (0.71 m3)

Question text

What percentage of the air is oxygen?

Select one:
a.
80%

b.
60%

c.
40%

d.
20%

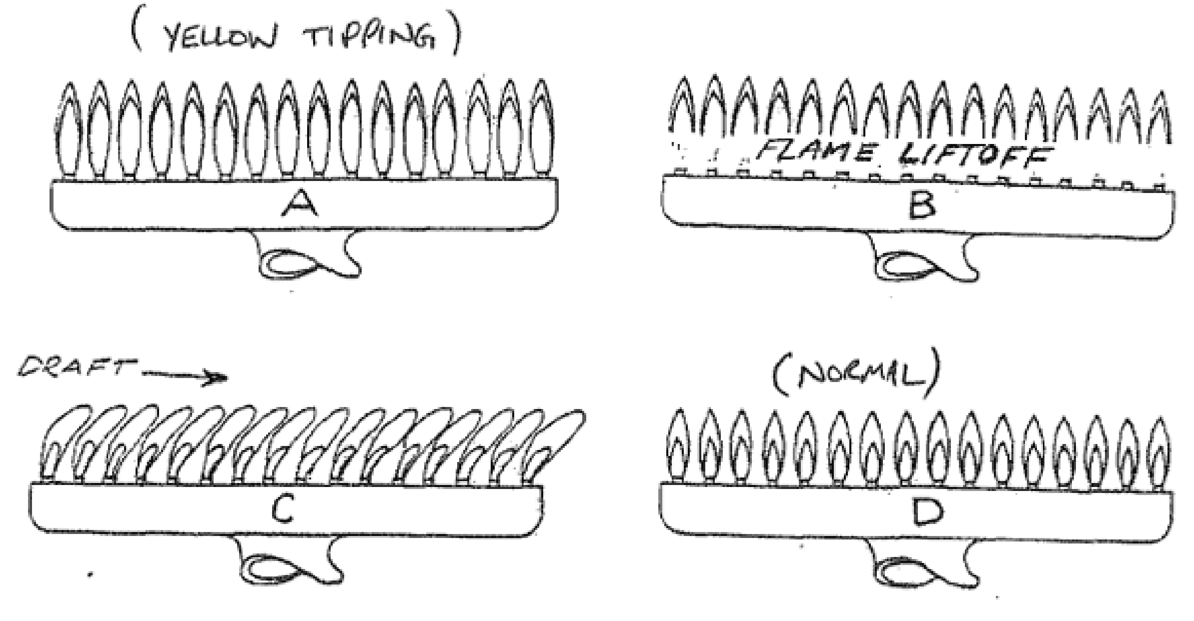
Feedback

Your answer is incorrect.

The correct answer is: 20%

Question text

Which example would be most likely to produce carbon monoxide?



Select one:

B

A

C

D

Feedback

Your answer is correct.

The correct answer is: B

Question text

The "ultimate" CO2 percent obtainable with combustion of natural gas is closest to:

Select one:

a.
12%

b.
4%

c.
20%

d.
50%

Feedback

Your answer is correct.

The correct answer is: 12%

Question text

Providing there is excess air, as the the CO2 level in the products of combustion decreases, the combustion efficiency:

Select one:
a.
increases

b.
is unaffected

c.
decreases

d.
remains constant

Feedback

Your answer is incorrect.

The correct answer is: decreases

Question text

If a combustion analysis indicates carbon monoxide, a gas fitter should:

Select one:
a.
check air supply, clock appliance, and clean burners

b.
decrease secondary air and increase input

c.
turn appliance regulator adjusting screw clockwise and decrease primary air

d.
install a power venter

Feedback

Your answer is correct.

The correct answer is: check air supply, clock appliance, and clean burners

Question text

"Barber'' burners use the ____________ principle.

Select one:
a.
flame retention

b.
ribbon port

c.
flame impingement

d.
atmospheric inshot

Feedback

Your answer is incorrect.

The correct answer is: flame retention

Question text

If an appliance with an atmospheric burner is found to have a 7.5% CO2 level and the input is correct, the gas fitter should:

Select one:
a.
do nothing more- 7.5% is acceptable

b.
increase input

c.
tape over some of the air openings on the appliance (to reduce excess air)

d.
install different burners from a higher efficiency appliance

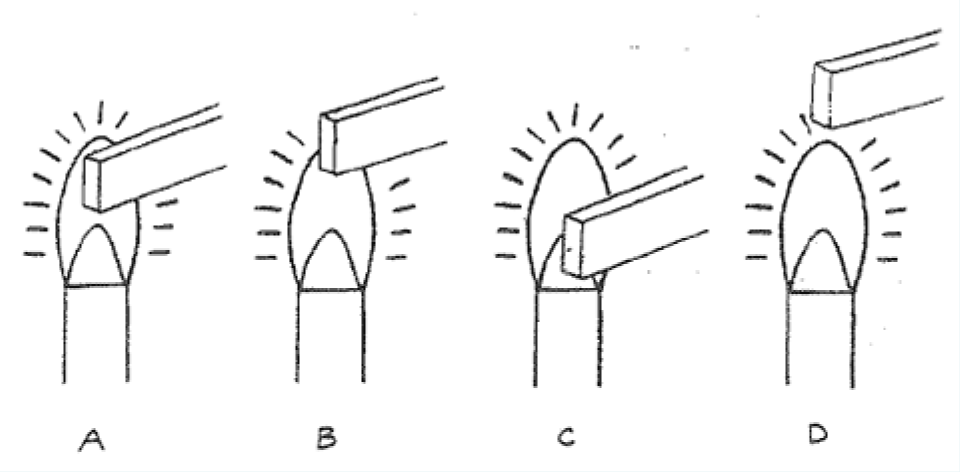
Feedback

Your answer is correct.

The correct answer is: do nothing more- 7.5% is acceptable

Question text

Which example below would be most likely to cause incomplete combustion?



Select one:

A

B

C

D

Feedback

Your answer is correct.

The correct answer is: C

Question text

Flame lift-off can be corrected by:

Select one:

a.
turning the regulator adjusting screw clockwise

b.
adding more secondary air

c.
decreasing primary air

d.
increasing pipe size to appliance

Feedback

Your answer is correct.

The correct answer is: decreasing primary air

Question text

The low-pressure area in the venturi of an atmospheric burner is created by:

Select one:
a.
the high velocity gas flow through the orifice

b.
the low velocity gas flow through the orifice

c.
the opening in the air shutter which allows primary air to enter

d.
the low gas pressure in the manifold

Feedback

Your answer is correct.

The correct answer is: the high velocity gas flow through the orifice

Question text

A volume of natural gas is burned to create 2,000,000 Btuh of heat. The volume of carbon dioxide produced would be:

Select one:
a.
4000 cu.ft

b.
10 000 cu.ft

c.
2000 cu.ft

d.
20 000 cu.ft

Feedback

Your answer is incorrect.

2 000 000 BTU ÷ 1000 BTU/cu.ft = 2000 ct.ft x 1

The correct answer is: 2000 cu.ft

Question text

The rapid combination of fuel with oxygen resulting in a release of heat would be a good definition of:

Select one:
a.
combustion

b.

relative heat value

c.
flash point

d.
calorific value

Feedback

Your answer is correct.

The correct answer is: combustion

Question text

A product of incomplete combustion which is colorless, odorless, tasteless and extremely toxic is:

Select one:
a.
carbon dioxide

b.
argon

c.
carbon monoxide

d.
aldehydes

Feedback

Your answer is incorrect.

The correct answer is: carbon monoxide

Question text

When you burn a hydrocarbon fuel, the products of complete combustion contain:

Select one:
a.
C02+CO+N2

b.
CO + C02 + H20

c.
C02 + N2 + H20

d.
CO + N2 + H20

Feedback

Your answer is correct.

The correct answer is: C02 + N2 + H20

Question text

Primary air would be defined as that air:

Select one:
a.
surrounding the gas flame

b.
premixed with the gas by the supplier

c.
drawn in at the burner inlet before ignition

d.
heated and circulated by the appliance

Feedback

Your answer is correct.

The correct answer is: drawn in at the burner inlet before ignition

Question text

During the combustion of natural gas the combustion products in the vent are cooled down below 120°F. Which of the following conditions will occur?

Select one:
a.
The flue products will condense and corrode the vent

b.
The quantity of CO will increase

c.
The quantity of carbon dioxide will increase

d.
The carbon in the flue gas will condense and plug the vent with soot

Feedback

Your answer is correct.

The correct answer is: The flue products will condense and corrode the vent

Question text

Which of the following conditions would cause floating flames?

Select one:
a.
Low gas pressure

b.
A blocked flue outlet

c.
Too much primary air

d.
A blocked vent cap

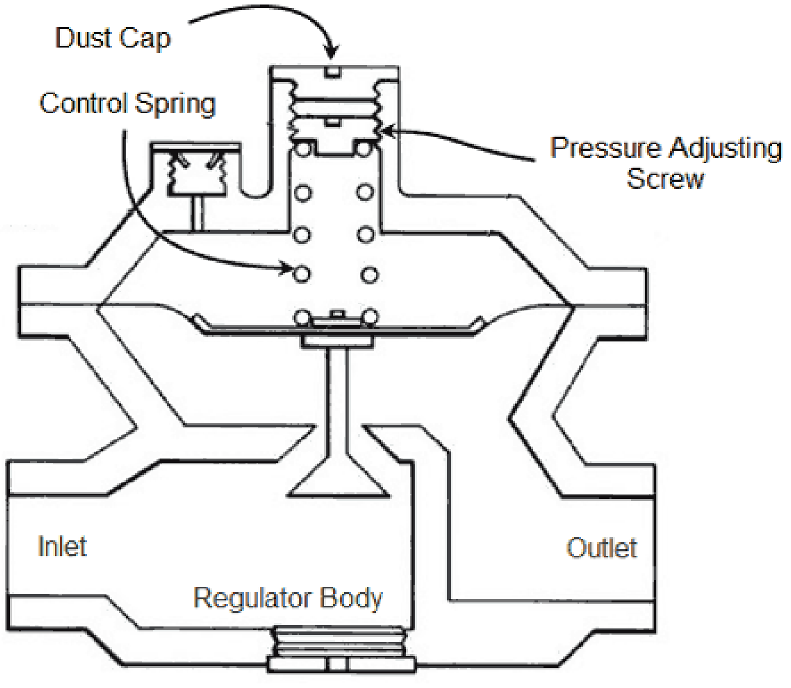
Feedback

Your answer is incorrect.

The correct answer is: A blocked flue outlet

Question text

In the illustration, the valve shown is:



Select one:
a.
normally closed

b.
normally open

c.
not recommended for low-pressure gas systems

d.
electrically actuated by the thermostat

Feedback

Your answer is incorrect.

The correct answer is: normally open

Question text

The restricting element of a regulator is the:

Select one:
a.
diaphragm

b.
limiting orifice

c.
spring

d.
valve disc

Feedback

Your answer is incorrect.

The correct answer is: valve disc

Question text

The minimum inlet pressure to a 2 PSIG (14 kPa) piping system sized with the current piping tables requires a regulator to reduce the pressure to 7 inches w.c. (1.75 kPa). The regulator is located some distance from the meter. Which of the following would you select as the inlet pressure to the regulator?

Select one:
a.
7 in.wc (1.75 kPa)

b.
5 PSIG (34 kPa)

c.
0.5 PSIG (3.5 kPa)

d.
2.5 PSIG (17 kPa)

Feedback

Your answer is incorrect.

Table A.4 2PSI - 1.5PSI

The correct answer is: 0.5 PSIG (3.5 kPa)

A gas pressure regulator, when installed outdoors, should have the vent:

Select one:
a.
opening pointing down

b.
restricted with an approved device

c.
opening pointing in a horizontal position to a safe location

d.
piped away to a safe location, pointing upward

Feedback

Your answer is incorrect.

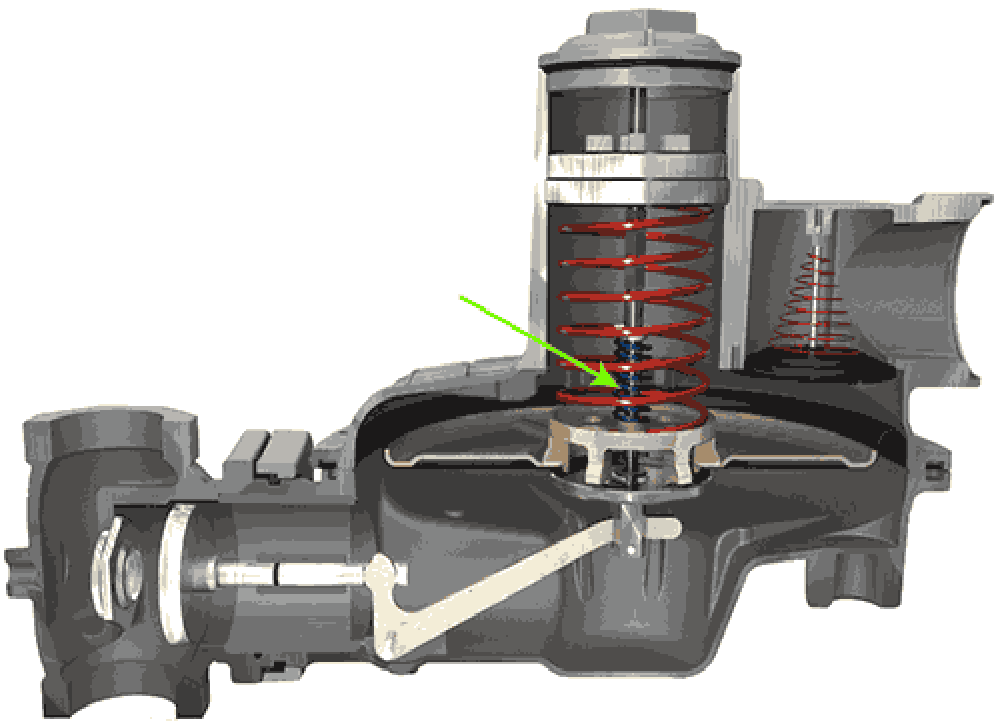
B149.1

5.2.2.3 / 5.5.6

The correct answer is: opening pointing down

Question text

Using the image below, identify the item indicated by the green arrow.



Select one:
a.
relief valve spring

b.
gas outlet

c.
vent limiter spring

d.
loading spring

Feedback

Your answer is correct.

The correct answer is: relief valve spring

Question text

An undersized vent pipe on a regulator may cause the:

Select one:
a.
pilot safety to fail

b.
restricting element to stay fully closed

c.
restricting element to stay fully open

d.
regulator to go into a hunting condition

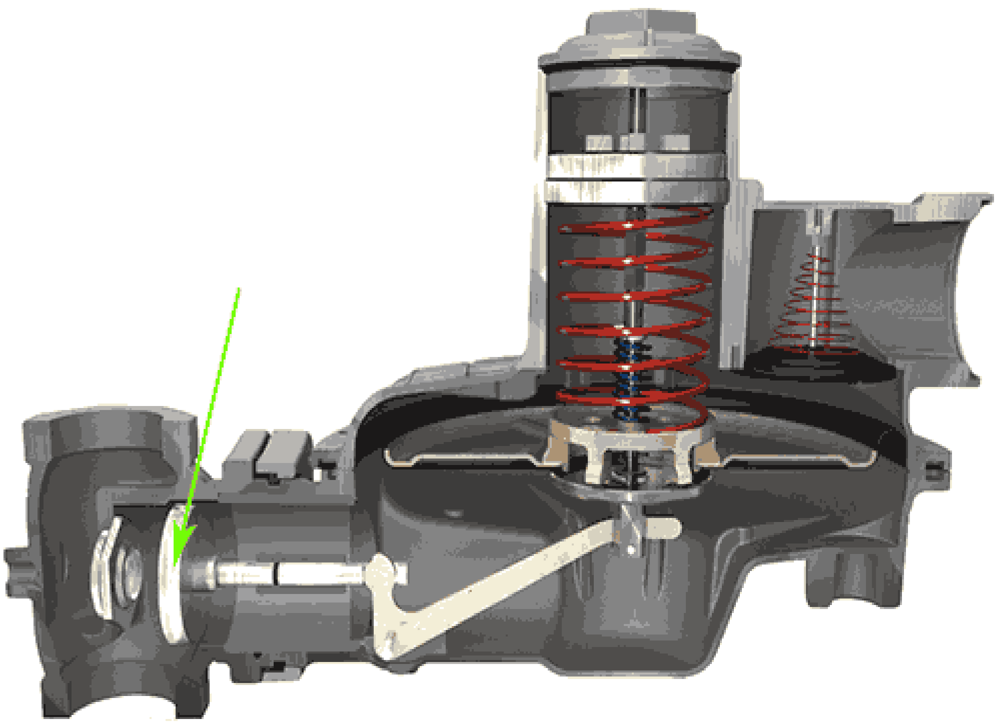
Feedback

Your answer is correct.

The correct answer is: regulator to go into a hunting condition

Question text

Using the image, identify the following item indicated by the green arrow.



Select one:

a.
inlet

b.
bellows

c.
valve disc

d.
relief valve

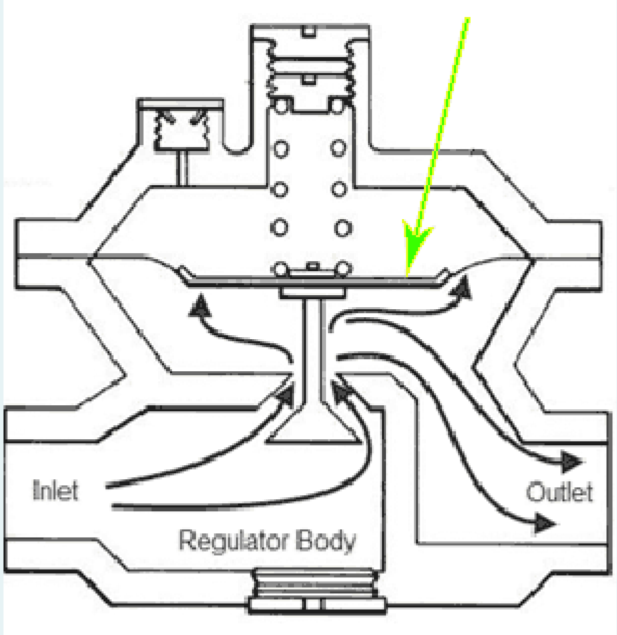
Feedback

Your answer is incorrect.

The correct answer is: valve disc

Question text

Using the image, identify the following item.



Select one:

a.
diaphragm

b.
surge arrestor

c.
loading element

d.
regulator tower separation

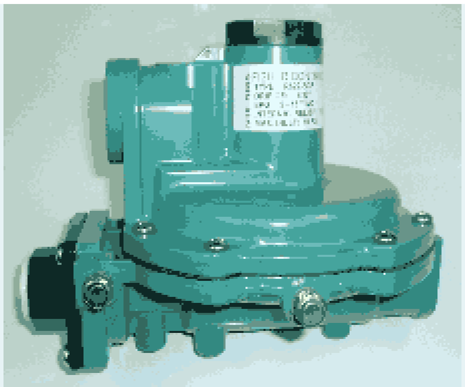
Feedback

Your answer is correct.

The correct answer is: diaphragm

Question text

What type of regulator is shown in the image?



Select one:

a.
First stage propane regulator

b.
Two stage propane regulator

c.
Industrial appliance regulator

d.
Utility supplied meter regulator, for low pressure

Feedback

Your answer is correct.

The correct answer is: Two stage propane regulator

Question text

When installing an appliance regulator the vent opening is completely blocked. This will cause the regulator to:

Select one:

a.
remain permanently closed

b.
regulate the gas flow at the incorrect pressure

c.
go into a hunting condition

d.
regulate the gas flow at the correct pressure

Feedback

Your answer is incorrect.

The correct answer is: regulate the gas flow at the incorrect pressure

Question text

If the orifice in a regulator is too small:

Select one:
a.
the pressure on the downstream side of the regulator will become too high

b.
the restricting element will fully open and not regulate downstream pressure

c.
the regulator will go into a hunting condition

d.
the regulator will open and close rapidly causing disc damage

Feedback

Your answer is correct.

The correct answer is: the restricting element will fully open and not regulate downstream pressure

Question text

On a combination gas valve the regulator controls:

Select one:
a.
only the main burner gas pressure

b.
only the pilot gas pressure

c.
the inlet pressure to the gas valve

d.
the size of the pilot burner

Feedback

Your answer is incorrect.

The correct answer is: only the main burner gas pressure

Question text

A two-stage propane regulator would typically be set for:

Select one:
a.
first stage 2 PSIG, second stage 7 inches w.c.

b.

first stage 15 inches w.c., second stage 11 inches w.c.

c.
first stage 5 PSIG, second stage 14 inches w.c.

d.
first stage 10 PSIG, second stage 11 inches w.c ..

Feedback

Your answer is incorrect.

The correct answer is: first stage 10 PSIG, second stage 11 inches w.c ..

Question text

Increasing the spring force in an appliance regulator will:

Select one:
a.
increase the manifold pressure

b.
damage the diaphragm

c.
decrease the manifold pressure

d.
increase the pilot flame

Feedback

Your answer is incorrect.

The correct answer is: increase the manifold pressure

Question text

A pressure regulator is said to be in equilibrium when the:

Select one:
a.
opening force of the diaphragm is equal to the closing force of the spring

b.
opening force of the spring is equal to the closing force of the upstream pressure

c.
opening force of the diaphragm is equal to the closing force of the orifice

d.
opening force of the spring is equal to the closing force of the downstream pressure

Feedback

Your answer is correct.

The correct answer is: opening force of the spring is equal to the closing force of the downstream pressure

Question text

The loading force in most regulators is provided by the:

Select one:
a.
diaphragm

b.
inlet gas pressure

c.
disc

d.
spring

Feedback

Your answer is correct.

The correct answer is: spring

Question text

_________________________ is the term which describes outlet pressure which is lower than set point pressure during flow conditions.

Select one:
a.
Boost

b.
Rise

c.
Lockup

d.
Droop

Feedback

Your answer is correct.

The correct answer is: Droop

Question text

When the inlet supply pressure to a line pressure regulator exceeds 1/2 PSIG, it shall:

Select one:
a.
be of a positive shut-off type

b.
be bypassed

c.
have a valve located immediately downstream

d.
have a leak-limiting orifice

Feedback

Your answer is incorrect.

B149.1

5.2.1.4

The correct answer is: be of a positive shut-off type

Question text

If a regulator is installed backwards in a piping system, what is the most likely result?

Select one:
a.
No difference- they are non-directional valves

b.
The regulator will close completely

c.
The regulator will open completely

d.
Pressure downstream will rise above set point

Feedback

Your answer is correct.

The correct answer is: The regulator will close completely

Question text

When selecting the components of a service regulator, the required downstream pressure will be determined by:

Select one:
a.
the selection of the proper body size

b.
the selection of the measuring element

c.
the selection of the restricting element

d.
the selection of the loading element

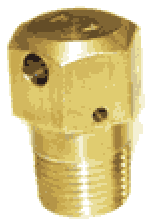
Feedback

Your answer is correct.

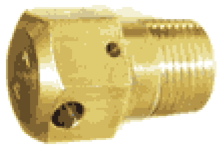
The correct answer is: the selection of the loading element

Question text

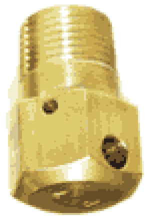
The leak limiting device shown below must be installed as shown in:



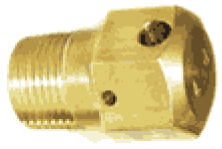
A



B



C



D

Select one:
A

B

C

D

Feedback

Your answer is incorrect.

The correct answer is: A

Question text

If a 5 PSIG system regulator has a 3/4 inch vent tapping and the vent line must run 65 feet, what must be done?

Select one:
a.
Use 1 inch pipe for the entire length - make the change at the vent tapping

b.
Use 3/4 inch pipe for the entire length- you may not change sizes

c.
Use 3/4 inch for the first 50 feet, then increase to 1 inch

d.
Use 3/4 inch pipe for the first 20 feet, then increase to 1 inch

Feedback

Your answer is incorrect.

5.5.4(b)(ii)

The correct answer is: Use 1 inch pipe for the entire length - make the change at the vent tapping

Question text

Too many fittings on a vent line could cause:

Select one:
a.
the restricting element to fully open

b.
the regulator to lock-up

c.
the restricting element to fully close

d.
the regulator to "hunt"

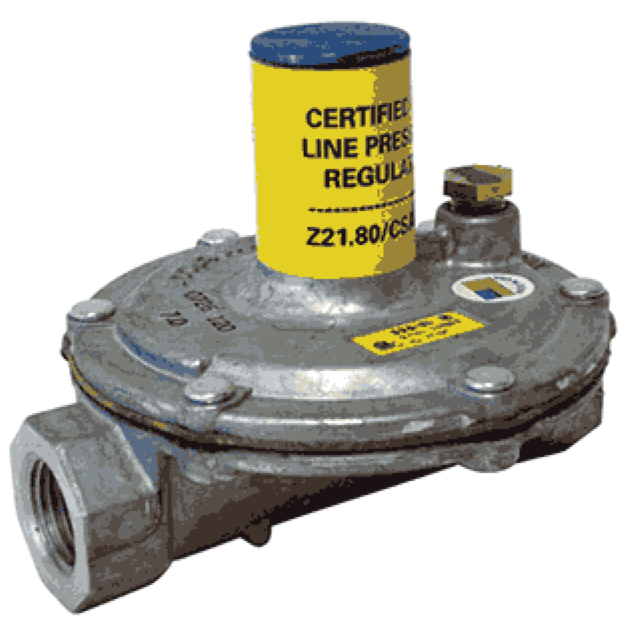
Feedback

Your answer is incorrect.

The correct answer is: the regulator to "hunt"

Question text

The device illustrated is a/an:



Select one:
a.
zero govenor

b.
earthquake valve

c.
pounds-to-inches (line pressure) regulator

d.
two-stage regulator

Feedback

Your answer is correct.

The correct answer is: pounds-to-inches (line pressure) regulator

Question text

The purpose of a pitot tube in a regulator is to:

Select one:
a.
relieve unwanted gases when overpressure occurs

b.
increase upstream pressure during static conditions

c.
keep downstream pressure closer to set point during flow conditions

d.
provide mechanical advantage for positive shut-off

Feedback

Your answer is correct.

The correct answer is: keep downstream pressure closer to set point during flow conditions

Question text

If a 5 PSIG line-pressure regulator (with internal relief) was installed in a boiler room, which of the following would be required?

Select one:

a.
All downstream piping must be Type "K" copper tubing

b.
The vent must be piped to a safe location outdoors

c.
A bypass shall be installed

d.
It shall be of negative shut-down type

Feedback

Your answer is incorrect.

The correct answer is: The vent must be piped to a safe location outdoors

Question text

A line pressure regulator operating at 2 PSIG or less shall be exempt from the requirements of Clause 5.2.1.5 (B) when equipped with which of the following?

Select one:

a.
A union on the downstream piping

b.
A pitot tube located in an area of high velocity and low pressure

c.
A vent leak-limiting system

d.
A negative shut-down system

Feedback

Your answer is incorrect.

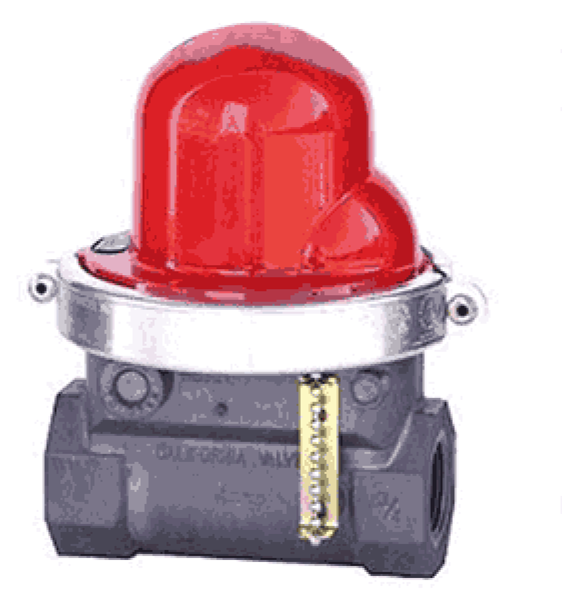
B149.1

5.2.2.4 / 5.2.3.1

The correct answer is: A vent leak-limiting system

Question text

The device illustrated is a/an:



Select one:
a.
solenoid valve

b.
redundant valve

c.
ball valve

d.
earthquake valve

Feedback

Your answer is correct.

The correct answer is: earthquake valve

Question text

A forced air furnace through which the circulating air flows in the opposite direction to the flue gas is a/an:

Select one:
a.
floor furnace

b.
counter flow furnace

c.
attic furnace

d.
wall furnace

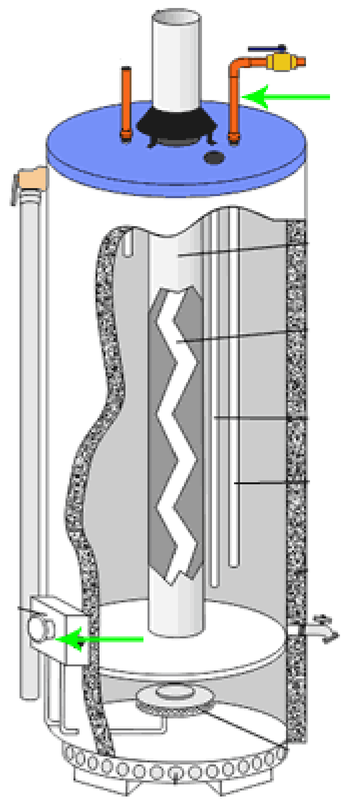
Feedback

Your answer is correct.

The correct answer is: counter flow furnace

Question text

Identify the correct components indicated by the green arrows in the illustration.



Select one:

a.
outer jacket; hot water pipe

b.
control valve; hot water outlet

c.
control valve; cold water inlet

d.
draft hood; drain

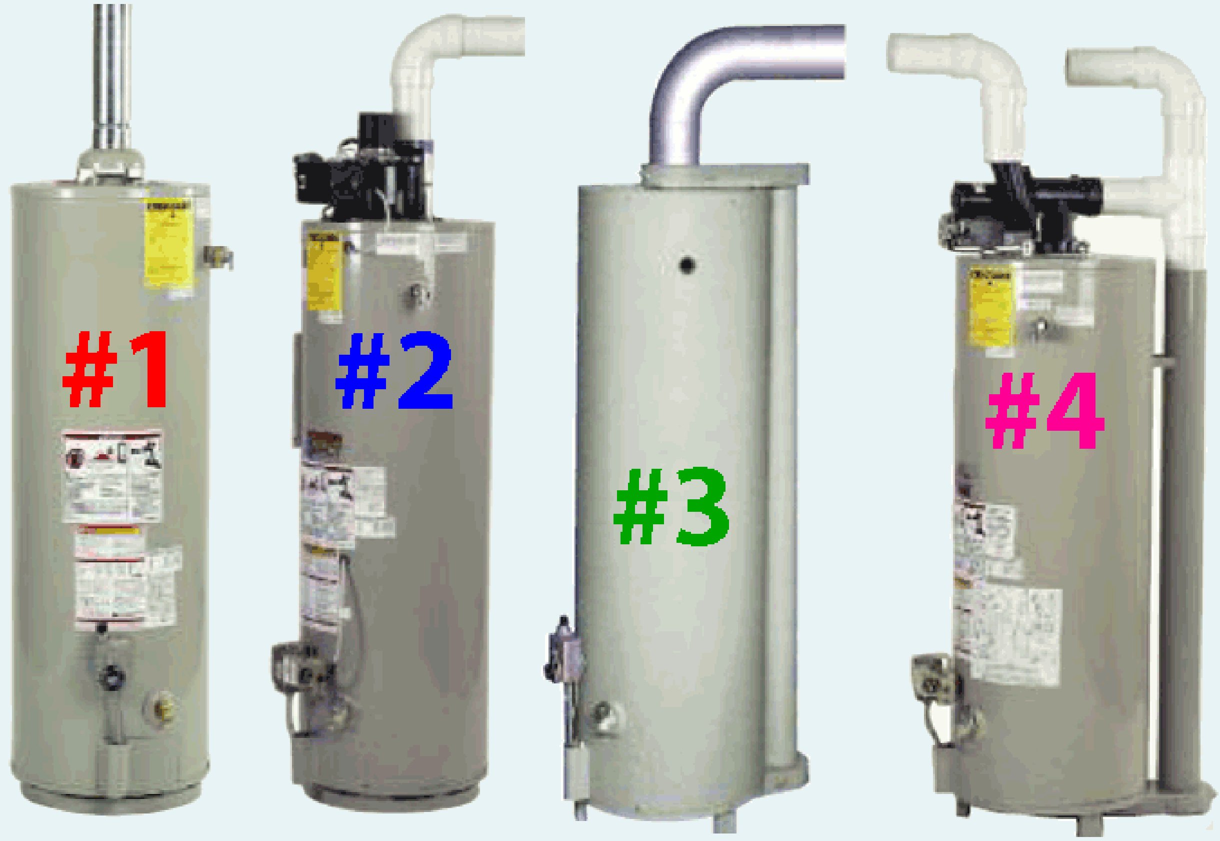
Feedback

Your answer is correct.

The correct answer is: control valve; cold water inlet

Question text

The illustration shows four basic kinds of appliances. Identify the correct series of applications and correct names for the appliances:



Select one:

a.
#1 - Direct Vent, #2 - Power Vented, #3 - Natural Draft, #4 - Power Direct Vent

b.
#1 - Power Direct Vent, #2 - Natural Draft, #3 - Power Vented, #4 - Direct Vent

c.
#1 - Natural Draft, #2 - Power Vented, #3 - Direct Vent, #4 - Power Direct Vent

d.
#1 - Natural Draft, #2 - Direct Vent , #3 - Power Vented, #4 - Power Direct Vent

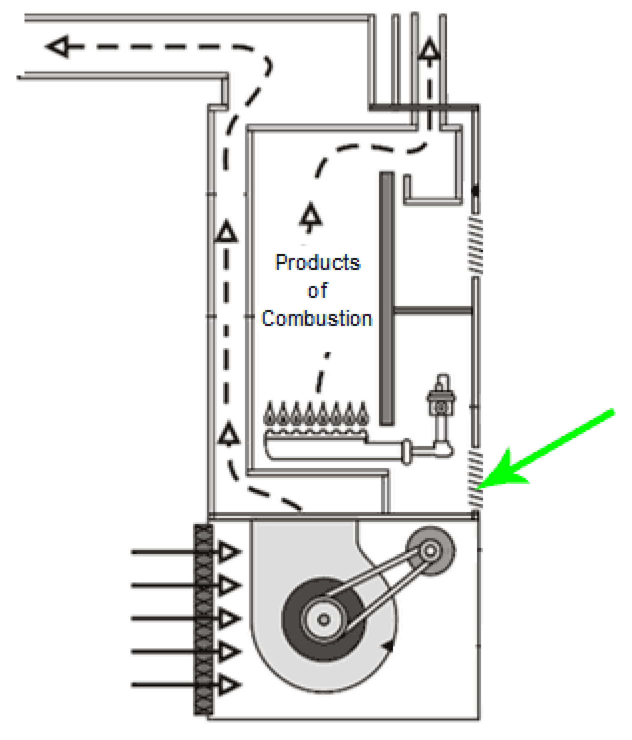
Feedback

Your answer is incorrect.

The correct answer is: #1 - Natural Draft, #2 - Power Vented, #3 - Direct Vent, #4 - Power Direct Vent

Question text

Identify the item indicated by the green arrow in the image.



Select one:

a.
ventilation air opening

b.
service access

c.
ventilation grill

d.
combustion air opening

Feedback

Your answer is incorrect.

The correct answer is: combustion air opening

Question text

The basic job of an operating control on a boiler is to:

Select one:
a.
energize the burner when boiler water gets too cold

b.
energize burner when boiler water gets too hot

c.
energize burner when boiler water level gets too low

d.
start pump when boiler water gets too cold

Feedback

Your answer is incorrect.

The correct answer is: energize the burner when boiler water gets too cold

Question text

The fan control on a forced air furnace generally operates on:

Select one:
a.
110 V

b.
1000 mV

c.
24 V

d.
800 mV

Feedback

Your answer is incorrect.

The correct answer is: 110 V

Question text

A residential gas range with fixed orifices can be converted from propane to natural gas by:

Select one:
a.
increasing or decreasing the house line pressure

b.
adjusting the burner spoiler screw

c.
change orifices and manifold pressure

d.
adjusting the primary air shutter

Feedback

Your answer is correct.

The correct answer is: change orifices and manifold pressure

Question text

A direct fired make-up air heater (DFMAH):

Select one:
a.
has a barometric draft regulator

b.
does not have a heat exchanger

c.
requires a stainless steel heat exchanger

d.
has a draft hood

Feedback

Your answer is incorrect.

The correct answer is: does not have a heat exchanger

Question text

The field conversion of a new gas appliance from the type of gas specified on the rating plate to another type of gas is:

Select one:
a.
allowed, if the conversion is done by a gas fitter and the rating plate is permanently marked for the gas being used

b.
only permitted when the conversion is done by the supplier

c.
permitted - only if authorized by the local gas inspector

d.
prohibited -the conversion of new appliances is unacceptable

Feedback

Your answer is correct.

B149.1

4.5.4

The correct answer is: allowed, if the conversion is done by a gas fitter and the rating plate is permanently marked for the gas being used

Question text

A residential gas range with universal orifices can be converted from propane to natural gas by:

Select one:
a.
turning the orifice cap counter-clockwise and change the regulator setting

b.
adjusting the primary air shutters

c.
decreasing the manifold pressure

d.
turning the orifice cap clockwise and change the regulator setting

Feedback

Your answer is incorrect.

The correct answer is: turning the orifice cap counter-clockwise and change the regulator setting

The temperature setting of the high limit on a forced air furnace shall not exceed:

Select one:
a.
350F

b.
200F

c.
250F

d.
160F

Feedback

Your answer is correct.

B149.1

7.8.6(b)

The correct answer is: 250F

Question text

On some older forced air furnaces, an air temperature sensing device is used to operate both the:

Select one:
a.
fan control and the damper motor

b.
fan control and the limit switch

c.
fan control and the rollout switch

d.
fan control and the thermostat

Feedback

Your answer is correct.

The correct answer is: fan control and the limit switch

Question text

A valve used to automatically shut-off the gas supply on a fire suppression system shall be located:

Select one:
a.
upstream of the manual shut-off valve for the water heater

b.
outside of the protected area

c.
under the protected area (exhaust canopy)

d.
near the largest input appliance

Feedback

Your answer is incorrect.

B149.1

4.19.2

The correct answer is: outside of the protected area

Question text

If the dip tube in a hot water tank breaks at the top of the tank, the most likely result would be:

Select one:
a.
the water would be too hot

b.
the water at the top of the tank will always be cold

c.
the tank could collapse if exposed to a backsiphonage condition

d.
the incoming cold water will mix with the hot water leaving producing tepid or inconsistant delivery temperature

Feedback

Your answer is correct.

The correct answer is: the incoming cold water will mix with the hot water leaving producing tepid or inconsistant delivery temperature

Question text

What is the minimum vent distance for a commercial gas clothes dryer from a fresh air intake?

Select one:
a.
3 Ft. (0.91 m)

b.
30 Ft. (9.14 m)

c.
20 Ft. (6.09 m)

d.
10 Ft. (3.05 m)

Feedback

Your answer is incorrect.

B149.1

7.4.4

The correct answer is: 10 Ft. (3.05 m)

Question text

An industrial site boiler room contains an appliance rated at 1,800,000 Btu/h (527.22 kW) (power burner, not equipped with a draft hood) and a boiler rated at 950,000 Btu/h (278.25 kW) (equipped with a barometer damper). Ventilation air is being delivered to the units through a hole-in-the-wall covered by wire mesh having a free air allowance of 80%. The wire mesh should have a minimum area of ________(round up or down to nearest whole number):

Select one:
a.
25 square inches (161 cm2)

b.
20 square inches (129 cm2)

c.
17.5 square inches (113 cm2)

d.
14 square inches (90 cm2)

Feedback

Your answer is correct.

The correct answer is: 25 square inches (161 cm2)

Question text

The minimum combustion air requirement for a single family dwelling complying with code clause 8.2.1 a&b with a 100,000 Btu/h (29.30 kW) furnace and a 36,000 Btu/h (10.54 kW) hotwater tank, both equipped with draft hoods is:

Select one:
a.
18 square inches (116 cm2)

b.
4 inch round duct (100 mm diameter)

c.
22 square inches (142 cm2)

d.
21 square inches (135 cm2)

Feedback

Your answer is correct.

Complies with 8.2.1(a)(b)

The correct answer is: 22 square inches (142 cm2)

Question text

A single family dwelling, complying with 8.2.1 (a) or (b), has a furnace with an input of 135,000 Btu/h (39.54 kW) and a hot water tank rated at 40,000 Btu/h (17.58 kW). Both appliances are equipped with draft control devices. If the duct is 35 feet (10.67 m) in developed length, the acceptable round duct equivalent is:

Select one:

a.
10 inches (25 cm)

b.
8 inches (20 cm)

c.
7 inches (18 cm)

d.
6 inches (15 cm)

Feedback

Your answer is correct.

25 inch sq = 6inch

increase 1 pipe size 7inch

The correct answer is: 7 inches (18 cm)

Question text

A boiler room contains the following equipment:

1 - 3,000,000 Btu/h (878.85 kW) appliance (barometric control)

2- 300,000 Btu/h (87.89 kW) hot water tanks (draft hoods)

1 -10,000,000 Btu/h (2,929.50 kW) boiler (barometric control)

1 - 2,000,000 Btu/h (585.90 kW) duct heater (no draft control)

Calculate the grille area for combustion air supply if the grilles efficiency is 75% (round up or down to nearest whole number):

Select one:

a.
1,575-inch2

b.
1,480-inch2

c.
1,410-inch2

d.
1,635-inch2

Feedback

Your answer is correct.

The correct answer is: 1,480-inch2

Question text

A gas-fired appliance equipped with a draft hood is rated for 90,000 Btu/h (26.36 kW). The total air required for complete combustion is:

Select one:

a.
90 CFH (2.54 m3)

b.
1,350 CFH (38.23 m3)

c.
900 CFH (25.49 m3)

d.
2,700 CFH (76.46 m3)

Feedback

Your answer is correct.

The correct answer is: 2,700 CFH (76.46 m3)

Question text

A single family dwelling complying with 8.2.1 (a) or (b) is equipped with a boiler and a hot water tank with a total input of 140,000 Btu/h (41 kW). Calculate the diameter of a round combustion air duct if it is only 12 feet (3.66 m) long (both units have draft hoods):

Select one:

a.
6 inch (15.24 cm) diameter

b.
5 inch (12.7 cm) diameter

c.
4 inch (1 0.16 cm) diameter

d.
3 inch (7.62 cm) diameter

Feedback

Your answer is correct.

The correct answer is: 5 inch (12.7 cm) diameter

Question text

A commercial building has a hot water boiler equipped with a draft control device with an input of 3,250,000 Btu/h (951.82 kW). The combustion air opening is a hole-in-the-wall covered by a 50% free air grill. The area of the grill required for combustion air is (round up or down to nearest whole number):

Select one:
a.
163 square inches (1,051 cm2)

b.
244 square inches (1,57 4 cm2)

c.
109 square inches (703 cm2)

d.
607 square inches (3,916 cm2)

Feedback

Your answer is correct.

The correct answer is: 607 square inches (3,916 cm2)

Question text

A boiler has in input of 200,000 Btu/h (58.58 kW), what is the volume of air required for theoretical combustion:

Select one:
a.
1,000 cubic feet (28.32 m3)

b.
2,000 cubic feet (53.63 m3)

c.
200 cubic feet (5.66 m3)

d.
6,000 cubic feet (169.90 m3)

Feedback

Your answer is incorrect.

The correct answer is: 2,000 cubic feet (53.63 m3)

Question text

In a direct vent appliance, the air for combustion is:

Select one:
a.
Drawn in through the open glass doors on the appliance

b.
Drawn in from openings in the bottom of the appliance

c.
Drawn in from an opening in the front of the appliance

d.
Drawn in from the outside to the combustion chamber

Feedback

Your answer is correct.

The correct answer is: Drawn in from the outside to the combustion chamber

Question text

A boiler without a draft control device is fired to an input of 3,000,000 Btuh. What volume of air would be required if being supplied by a combustion air fan?

Select one:
a.
45 000 CFH

b.
30 000 CFH

c.
90 000 CFH

d.
3 000 CFH

Feedback

Your answer is correct.

The correct answer is: 90 000 CFH

Question text

Size the combustion air supply for a residential building complying with Clause 8.2.1 (a) & (b). The residence has a 140,000 Btuh mid-efficient furnace with no draft control and a 60,000 Btuh hot water tank with draft control. The ductwork runs 40 feet horizontally from the mechanical room.

Select one:
a.
3 in.

b.
4 in.

c.
5 in.

d.
6 in.

Feedback

Your answer is correct.

60MBH ==> T.8.1 ==> 11 sq in 4 inch

200MBH ==> T.8.2 ==> 14 sq in 5 inch

Increase 1 pipe size 6 inch

The correct answer is: 6 in.

Question text

Calculate the openings required for a mechanical room located within a leaky structure. The mechanical room has a natural draft, atmospheric boiler rated at 175,000 Btuh and a 75,000 Btuh natural draft unit heater. The volume of the structure may be used to satisfy the air requirement. The openings are to be covered with an 80% mesh (pick closest answer):

Select one:
a.
250 sq. in

b.
45 sq.in

c.
312.5 sq.in

d.
36 sq.in

Feedback

Your answer is incorrect.

B149.1

8.2.6

250MBH / 80 = 312.5 sq.in

The correct answer is: 312.5 sq.in

Question text

Calculate the size of openings required for a 1,750,000 Btuh natural draft boiler and a 750,000 Btuh boiler with a power burner. The openings are to have louvers with a 60% free area (pick closest answer):

Select one:
a.
combustion air: 416 sq. in. -ventilation air: 42 sq. in.

b.
combustion air: 83 sq. in. -ventilation air: 10 sq. in.

c.
combustion air: 139 sq. in.- ventilation air: 17 sq. in.

d.
combustion air: 369 sq. in. -ventilation air: 37 sq. in.

Feedback

Your answer is incorrect.

The correct answer is: combustion air: 369 sq. in. -ventilation air: 37 sq. in.

Question text

Calculate the size of combustion air opening required for a residential building with hot water tank rated at 55,000 Btuh and a furnace rated at 125,000 Btuh, both with draft control. The building does not comply with Clause 8.2.1 (a) or (b). The louvers have a free area of 70% and the volume of the structure is 6,000 cubic feet (pick closest answer):

Select one:
a.
23 sq. in.

b.
41 sq. in.

c.
36 sq. in.

d.
29 sq. in.

Feedback

Your answer is incorrect.

Table 8.3

29 sq.in / 70%

The correct answer is: 41 sq. in.

Question text

Calculate the combustion and ventilation air openings for two 250,000 Btuh appliances with no draft control. The openings are to be covered with 80% mesh (pick closest answer):

Select one:
a.
combustion air opening: 21 sq. in.- ventilation air: 12.5 sq. in.

b.
combustion air opening: 134 sq. in. -ventilation air: 13.4 sq. in.

c.
combustion air opening: 21 sq. in. -ventilation air: 2.12 sq. in.

d.
combustion air opening: 134 sq. in.- ventilation air: 12.5 sq. in.

Feedback

Your answer is correct.

The correct answer is: combustion air opening: 21 sq. in.- ventilation air: 12.5 sq. in.

Question text

Calculate. the combustion air requirements for a 50,000 Btuh hot water tank installed in a structure. The hot water tank has draft control and the building complies with Clause 8.2.1 (a) and (b):

Select one:
a.
50 inches squared for combustion air

b.
No air required

c.
50 inches squared for combustion air and 50 inches squared for ventilation air

d.
100 inches squared of free area

Feedback

Your answer is incorrect.

B149.1

8.2.3 / 8.2.6

The correct answer is: No air required

Question text

The volume of air required to achieve theoretical combustion for 50 cubic feet of natural gas is:

Select one:
a.
5,000 cubic feet

b.
50 cubic feet

c.
500 cubic feet

d.
150 cubic feet

Feedback

Your answer is incorrect.

10 to 1 CFH air to CFH Nat gas

The correct answer is: 500 cubic feet

Question text

A single family dwelling complying with Clause 8.2.1 (a) has a 220,000 Btuh fan-assist furnace. What is the required diameter of the combustion air duct?

Select one:
a.
7 inch

b.
4 inch

c.
5 inch

d.
6 inch

Feedback

Your answer is incorrect.

No draft control T.8.2

The correct answer is: 5 inch

Question text

When initially setting a barometric draft control for proper operating conditions:

Select one:
a.
the gate must be set at midpoint using weights

b.
the determination of the gate position must be done by instruments (draft gauge)

c.
the gate must be set so the upper portion of the gate swings in, on an increase in up-draft

d.
you must ensure closure of the gate with a down-draft

Feedback

Your answer is correct.

The correct answer is: the determination of the gate position must be done by instruments (draft gauge)

Question text

A down draft through a vent on an atmospheric fired appliance will cause

Select one:

a.
Spillage through the front opening of the combustion chamber cutting of secondary air

b.
Probable pilot outage and distortion of main flame

c.
Production of carbon monoxide

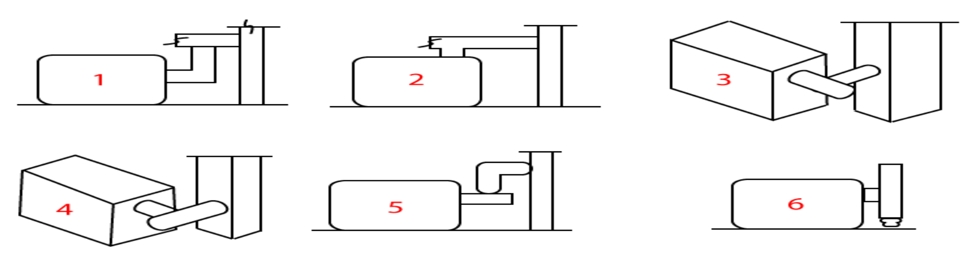
d.
Spillage of products of combustion at the draft diverter with no effect to burner combustion

Feedback

Your answer is incorrect.

The correct answer is: Spillage of products of combustion at the draft diverter with no effect to burner combustion

Question text



In the below drawing , which three diagrams have the barometric draft control in the correct positions ?

Select one:

a.
1 , 3 , 5

b.
1 , 2 , 4

c.
1 , 2 , 3

d.
2 , 4 , 6

Feedback

Your answer is incorrect.

The correct answer is: 1 , 2 , 4

Question text

If a gas-fired appliance is connected to a chimney which also serves an oil-fired appliance through a separate opening , the gas-fired appliance should be connected at

Select one:
a.
The same level as the oil-fired appliance
b.
A higher level than the oil-fired appliance

c.
None of the options are correct because it contravenes code regulations
d.
A lower level than the oil-fired appliance

Feedback

Your answer is correct.

8.12.4

The correct answer is: A higher level than the oil-fired appliance

Question text

What is the minimum horizontal clearance from an obstruction to a vent termination without increasing the height ?

Select one:
a.
10 feet (3.66 m)

b.
2 feet (0.6 m)

c.
8 feet (2.44 m)

d.
4 feet (1.22 m)

Feedback

Your answer is correct.

8.14.2

The correct answer is: 10 feet (3.66 m)

Question text

The illustration below is of what ?

Select one:
a.
B-vent chimney liner
b.
Specialty venting for high efficiency appliance
c.
A flex chimney liner
d.
Mid-efficiency direct vent chimney liner

Feedback

Your answer is correct.

The correct answer is: A flex chimney liner

Question text

Draft in a vent is created by

Select one:
a.
Atmospheric pressure and height of the vent
b.
The height and diameter of the vent
c.
The outdoor temperature and the area of the vent
d.
The difference in weight of the air outside and the combustion gases inside the vent

Feedback

Your answer is correct.

The correct answer is: The difference in weight of the air outside and the combustion gases inside the vent

Question text

Which of the following appliances can be vented into a common B vent ?

Select one:
a.
Oil-fired boiler **;** gas furnace **;** gas space heater
b.
Gas boiler **;** oil furnace; gas space heater **;** gas dryer
c.
Gas boiler **;** gas furnace **;** gas space heater
d.
Gas boiler **;** gas furnace **;** incinerator **;** gas space heater

Feedback

Your answer is correct.

B.149.1

Table 8.5

The correct answer is: Gas boiler **;** gas furnace **;** gas space heater

Question text

A chimney or vent is

Select one:
a.
Always a Type B-vent or tile-lined chimney
b.
Any vertical section of the venting system, including offsets, which conveys flue gases to the outdoors

c.
Everything downstream of the draft hood outlet or flue collar
d.
Any part of a venting system which conveys flue gases

Feedback

Your answer is incorrect.

The correct answer is: Any vertical section of the venting system, including offsets, which conveys flue gases to the outdoors

Question text

When can a gas appliance installed in a dwelling unit be connected to a flue serving a solid-fuel fireplace ?

Select one:
a.
When it is connected through a separate opening and above the solid-fuel appliance
b.
A new vent must be installed
c.
Never

d.
Only when the solid fuel fireplace is shut off permanently

Feedback

Your answer is incorrect.

8.12.3

The correct answer is: Only when the solid fuel fireplace is shut off permanently

Question text

The type of draft that occurs in the combustion chamber of an appliance equipped with a draft hood is

Select one:
a.
Negative over-fire draft
b.
Positive pressure draft
c.
Neutral over-fire draft

d.
Negative pressure draft

Feedback

Your answer is correct.

The correct answer is: Neutral over-fire draft

Question text

The vent is

Select one:
a.
That portion of a venting system designed to convey flue gases directly to the outdoors
b.
The horizontal section of pipe that connects the furnace to the chimney
c.
The pipe that connects the furnace to the water heater

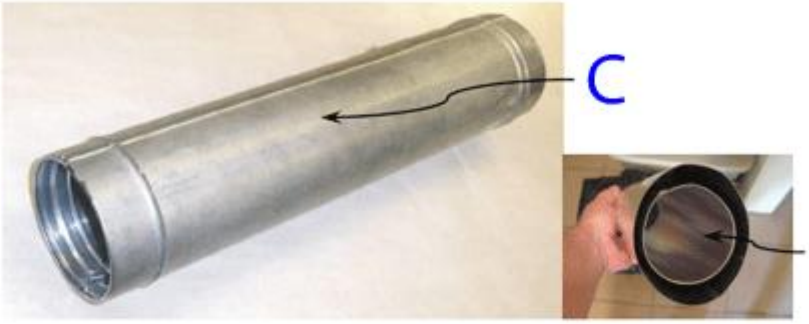
d.
The vertical section of pipe that connects the furnace to the chimney

Feedback

Your answer is correct.

The correct answer is: That portion of a venting system designed to convey flue gases directly to the outdoors

Question text



The above diagram is of a commercial B-vent. Please indicate C

Select one:
a.
Galvanized casing

b.
Aluminum casing

c.
Air space

d.
Condensate path

Feedback

Your answer is correct.

The correct answer is: Galvanized casing

Question text

The minimum allowable diameter for a round vent is

Select one:
a.
2 inches (5.08 cm)

b.
4 inches (10.16 cm)

c.
3 inches (7.62 cm)

d.
5 inches (12.7 cm)

Feedback

Your answer is correct.

8.13.3

The correct answer is: 3 inches (7.62 cm)

Question text

The difference in temperature between the flue gas in the vent and the ambient air is known as the

Select one:
a.
Ultimate stack temperature
b.
Gross stack temperature
c.
Net stack temperature
d.
Theoretical temperature

Feedback

Your answer is incorrect.

The correct answer is: Net stack temperature

Question text

A single fan-assisted furnace may be

Select one:
a.
Vented with Schedule 40 PVC or ABS pipe
b.
Vented directly into a tile-lined masonry chimney
c.
Vented directly into any size tile-lined masonry chimney provided the chimney also serves a gas water heater
d.
vented into a tile-lined masonry chimney provided the chimney is first lined with an approved Type B -vent

Feedback

Your answer is correct.

The correct answer is: vented into a tile-lined masonry chimney provided the chimney is first lined with an approved Type B -vent

Question text

If a single fan-assisted appliance is vented into a masonary chimney lined with an approved Type B -vent and has three elbows in the vent connector **,** the capacity of the chimney liner shall be reduced by

Select one:
a.
30 %

b.
15 %

c.
20 %

d.
10 %

Feedback

Your answer is incorrect.

C.2.4

The correct answer is: 15 %

Question text

Which of the following limitations applies to B-vents ?

Select one:
a.
It can only be used on condensing appliances
b.
It may only be used in the same room as the appliance
c.
It may only be used on recessed wall heaters
d.
It may not be used where vent temperatures exceed 470 °F (244°C)

Feedback

Your answer is incorrect.

The correct answer is: It may not be used where vent temperatures exceed 470 °F (244°C)

Question text

What is the minimum gauge thickness of a 5 inch diameter single-wall vent connector serving a draft hood equipped appliance ?

Select one:
a.
22

b.
26

c.
28

d.
24

Feedback

Your answer is correct.

8.18.3 (A)

The correct answer is: 28

Question text

A single wall vent connector may pass through a floor or ceiling provided that

Select one:
a.
It has a thimble six inches longer in diameter than the vent connector
b.
A single-wall vent connector is not permitted to pass through a floor or ceiling
c.
It has a thimble four inches larger in diameter than the vent connector
d.
A non-combustible insulation is used to prevent combustible surfaces from exceeding 194 °F (90 °C)

Feedback

Your answer is incorrect.

8.18.23

The correct answer is: A single-wall vent connector is not permitted to pass through a floor or ceiling

Question text

One purpose of a draft hood is to:

Select one:
a.
Neutralize excess air
b.
Allow for spillage
c.
Prevent back drafts in the common vent

d.
keep the flue cold

Feedback

Your answer is correct.

The correct answer is: Allow for spillage

Question text

Condensation in a venting system could be caused by

Select one:
a.
Under-firing of the appliance and/or the chimney is too large
b.
Over-firing of the appliance and/or the chimney is too small
c.
Under-firing of the appliance and/or the chimney is too small
d.
Over-firing of the appliance and/or the chimney is too large<

Feedback

Your answer is incorrect.

The correct answer is: Under-firing of the appliance and/or the chimney is too large

Question text

The maximum temperature for Type B-vent is approximately

Select one:
a.
212 °F
b.
470 °F
c.
140 °F
d.
2100 °F

Feedback

Your answer is correct.

The correct answer is: 470 °F

Question text

A recessed wall furnace is the only appliance that may use Type _______ vent.

Select one:
a.

A

b.
C

c.
B

d.
BW

Feedback

Your answer is incorrect.

The correct answer is: BW

Question text

The minimum distance above a roof for any type or size of vent (other than special venting) is

Select one:
a.
300 mm

b.
900 mm

c.
600 mm

d.
200 mm

Feedback

Your answer is incorrect.

8.14.2

The correct answer is: 600 mm

Question text

The minimum size of a ventilated metal thimble used on an incinerator with a vent connector other then B vent having a diameter of 8 inches shall be

Select one:
a.
24 inches

b.
20 inches

c.
12 inches

d.
30 inches

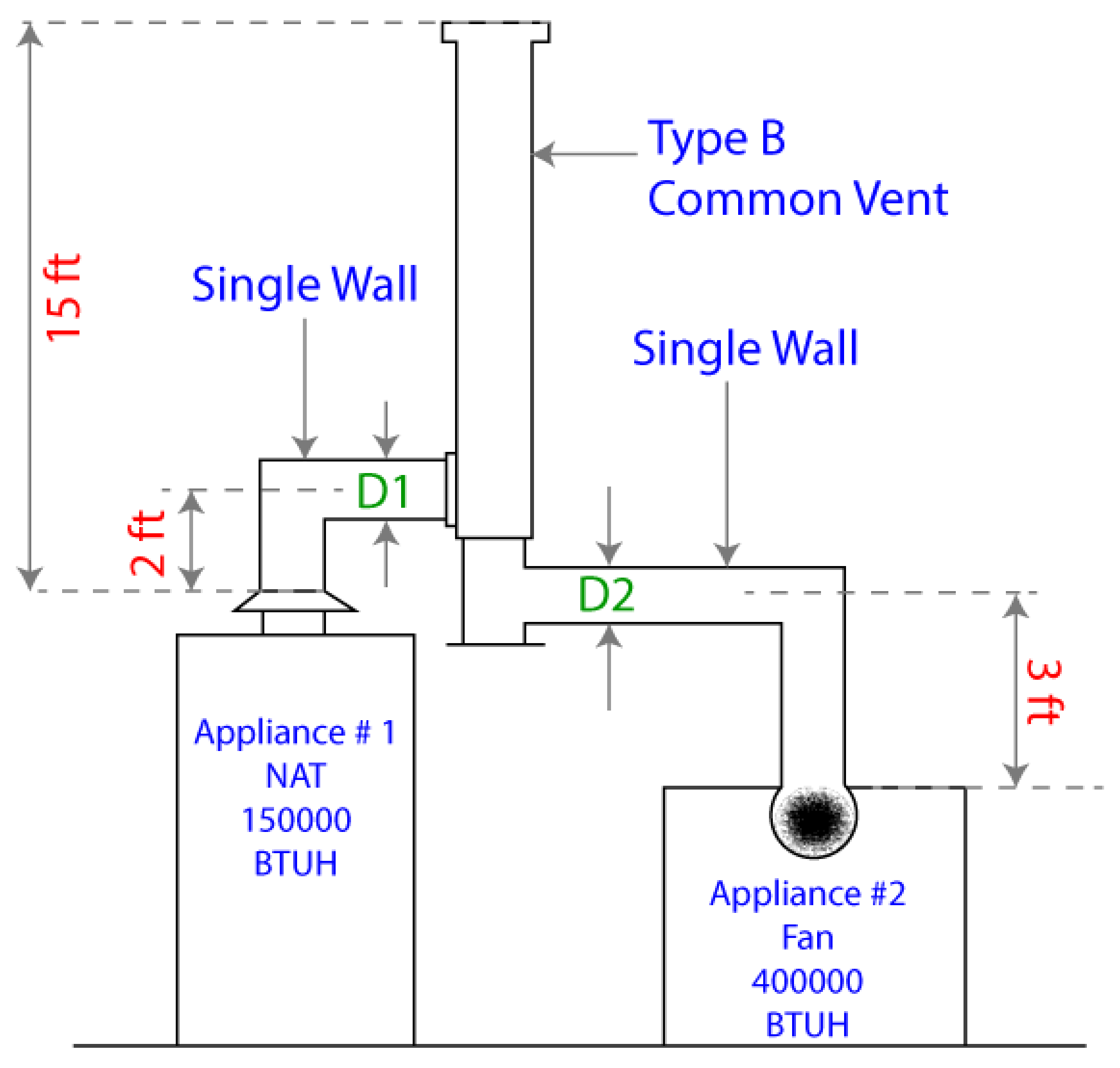
Feedback

Your answer is incorrect.

8.18.12

The correct answer is: 20 inches

Question text



From the above drawing that doesn’t comply with 8.2.1 a or b what should be the diameter of (D1) for appliance #1 using single wall connector?

Select one:
a.
7 inches (17.78 cm)

b.
8 inches (20.32 cm)

c.
6 inches (15.24 cm)

d.
5 inches (12.7 cm)

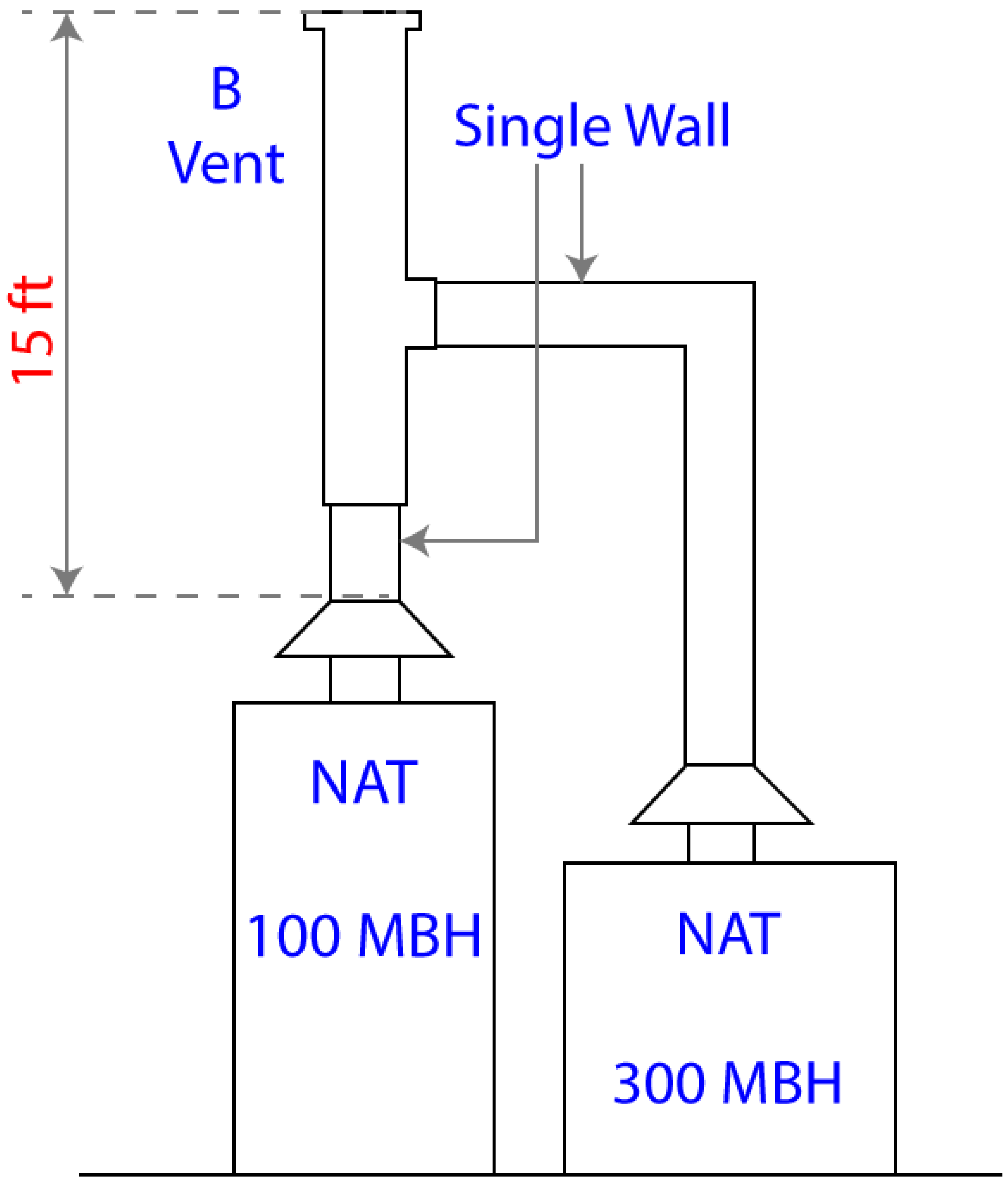
Feedback

Your answer is incorrect.

The correct answer is: 7 inches (17.78 cm)

Question text

In the drawing below that complies with 8.2.1 a or b, what is the diameter of the common vent ?



Select one:

a.
9 inches (25.40 cm)

b.
6 inches (15.24 cm)

c.
10 inches (223.86 cm)

d.
8 inches (20.32 cm)

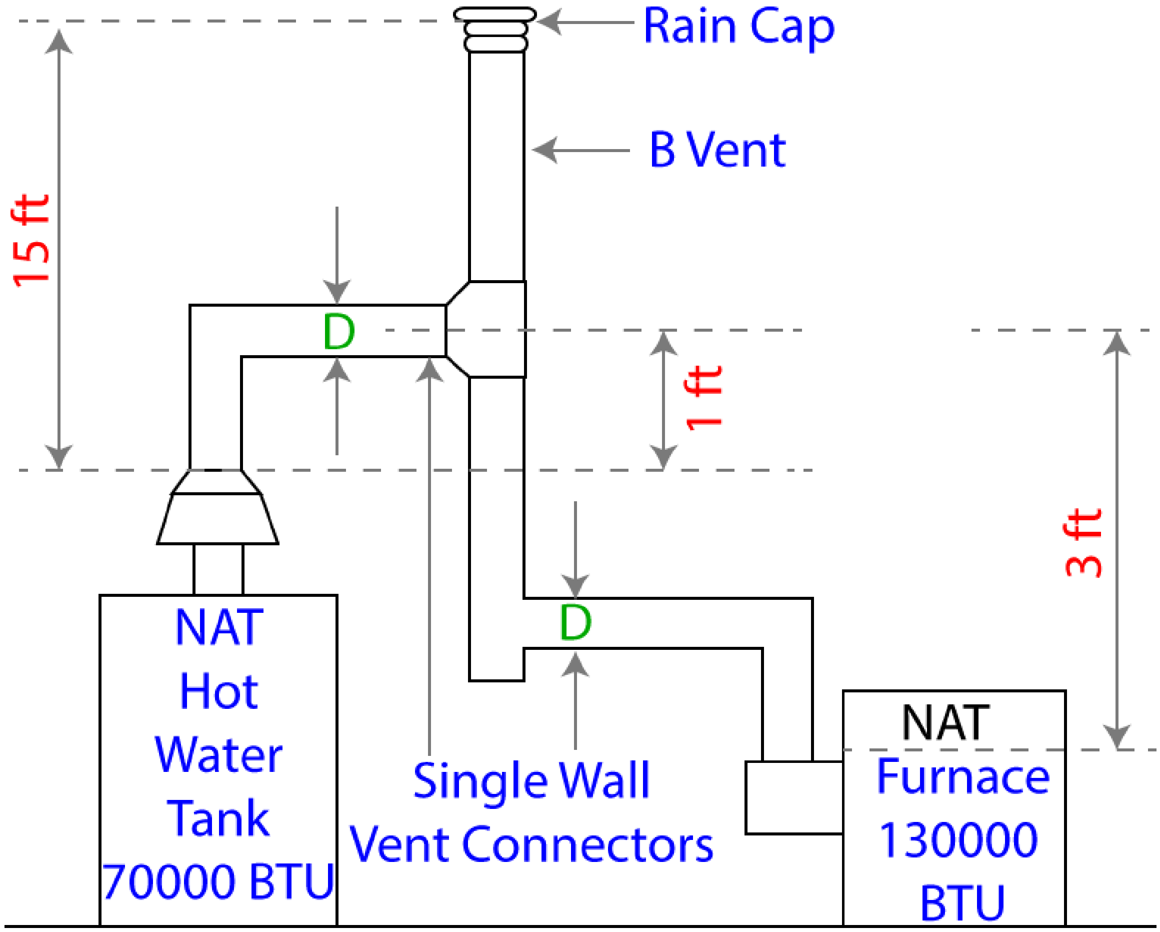
Feedback

Your answer is incorrect.

The correct answer is: 10 inches (223.86 cm)

Question text

Referring to the drawing below that doesn't comply with 8.2.1 a or b, the furnace single wall vent connector must be a minimum diameter of



Select one:

a.
4 inches (10.16 cm)

b.
5 inches (12.70 cm)

c.
6 inches (15.24 cm)

d.
7 inches (17.78 cm)

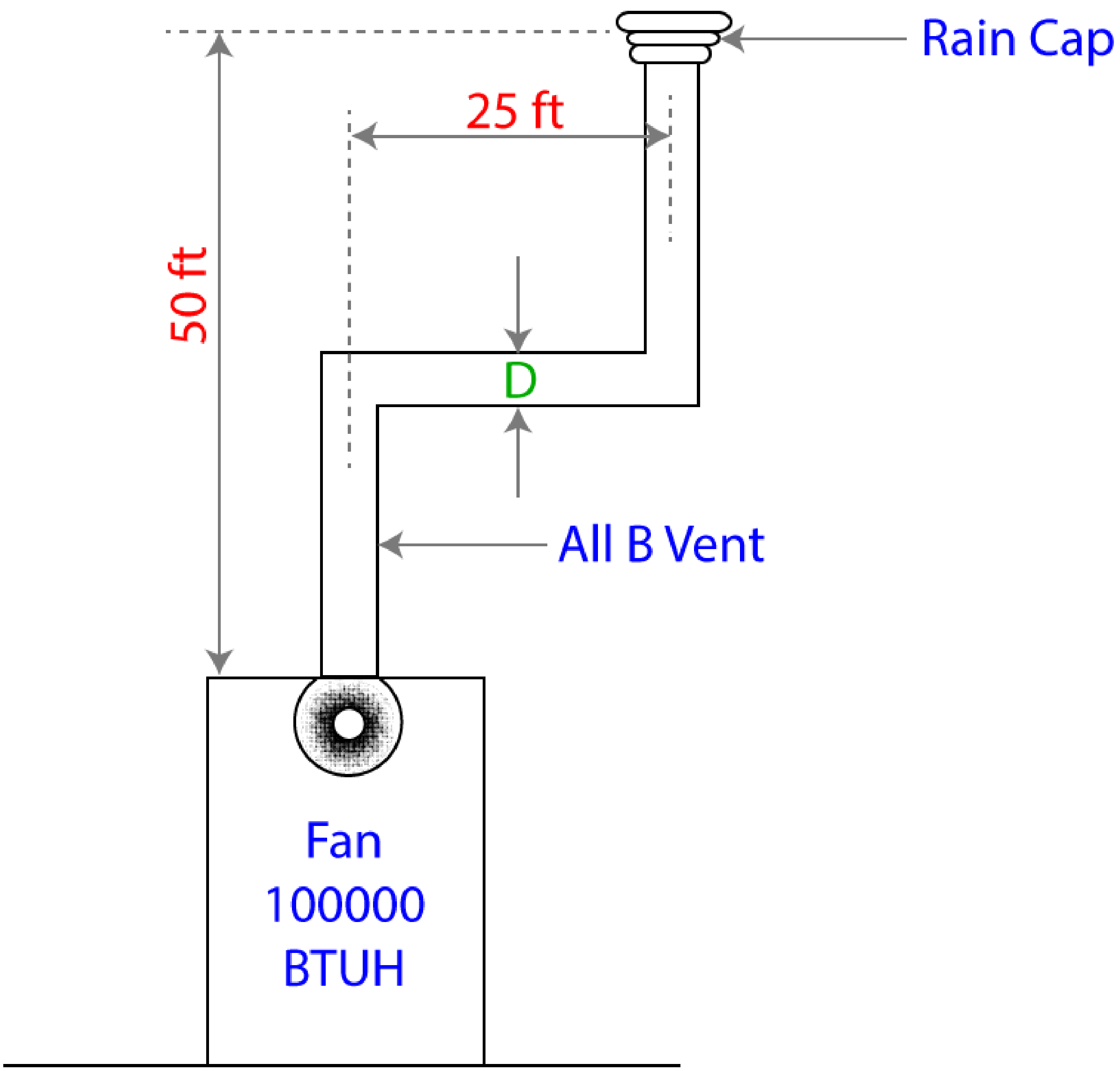
Feedback

Your answer is incorrect.

The correct answer is: 6 inches (15.24 cm)

Question text

Referring to the drawing below, that doesn’t comply with 8.2.1 a or b, what is the minimum diameter of D?



Select one:

a.
6 inches (15.24 cm)

b.
5 inches (12.70 cm)

c.
7 inches (17.78 cm)

d.
4 inches (10.16 cm)

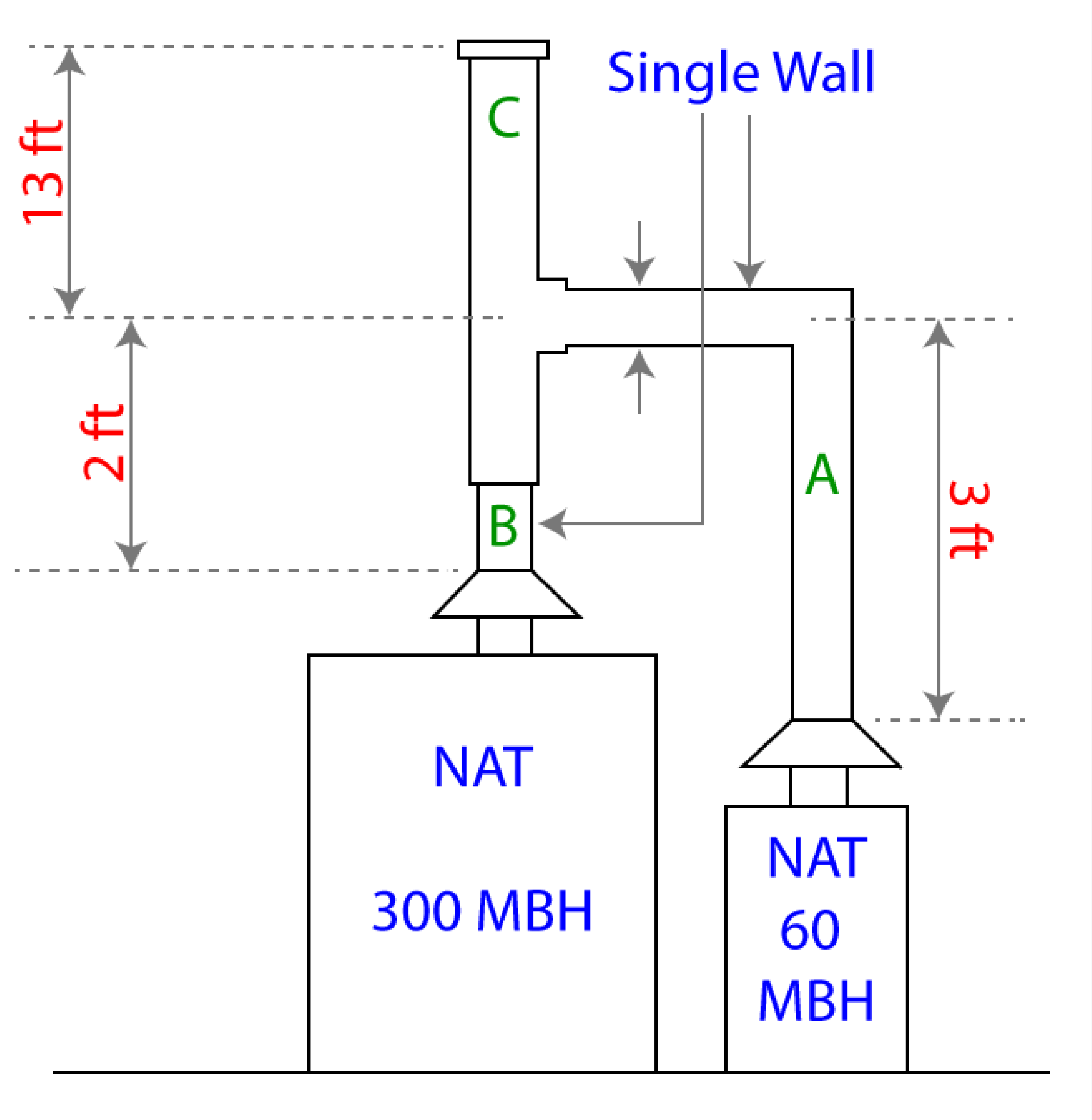
Feedback

Your answer is incorrect.

The correct answer is: 4 inches (10.16 cm)

Question text

In the drawing below, that complies with 8.2.1 a or b calculate the diameter of B



Select one:

a.

9 inch (22.86 cm)

b.
8 inch (20b32 cm)

c.
12 inch (30.48 cm)

d.
10 inch (25.40)

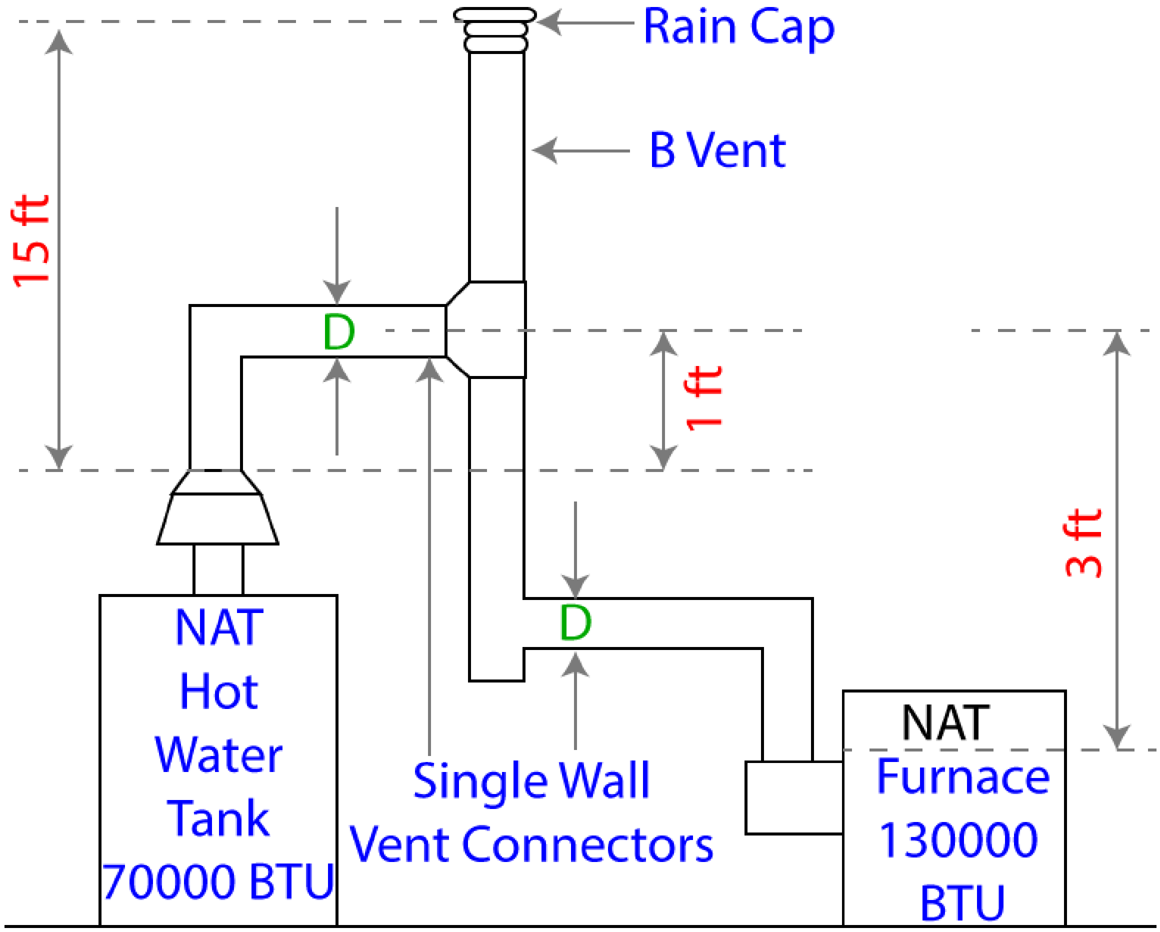
Feedback

Your answer is incorrect.

The correct answer is: 10 inch (25.40)

Question text

Referring to the drawing below that complies with 8.2.1, a or b, the minimum diameter of the single wall vent connector on the hot water heater is how many inches ?



Select one:
a.
6 inches (12.70 cm)

b.
8 inches (20.32 cm)

c.
5 inches (15.24 cm)

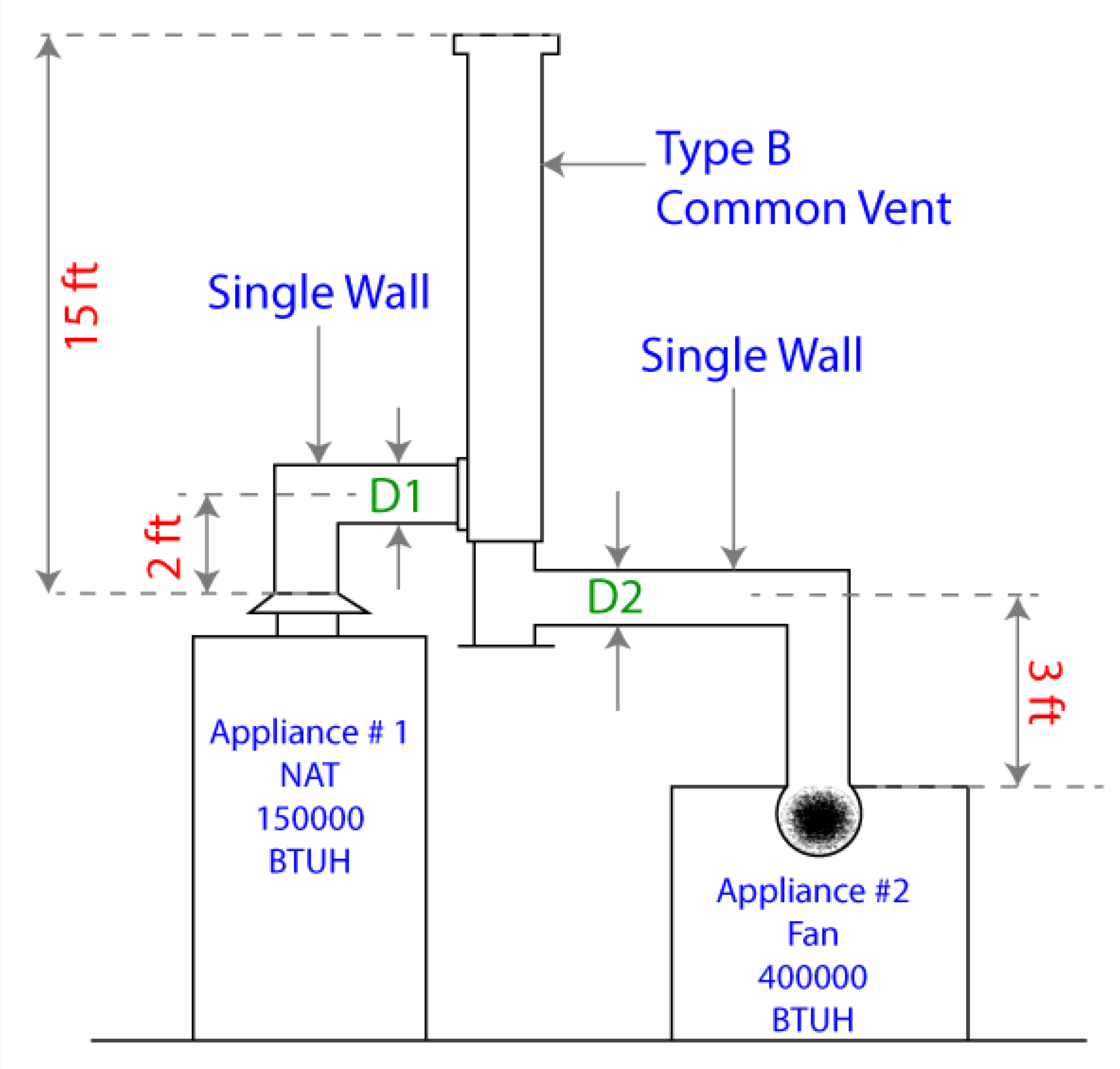
d.
7 inches (17.78 cm)

Feedback

Your answer is incorrect.

The correct answer is: 6 inches (12.70 cm)

Question text



In the above drawing (that doesn't comply with 8.2.1 a or b) what should the diameter of D1 for appliance #1 using a single wall vent connector be ?

Select one:

a.
7 inches (17.78 cm)

b.
6 inches (15.24 cm)

c.
8 inches (20.32 cm)

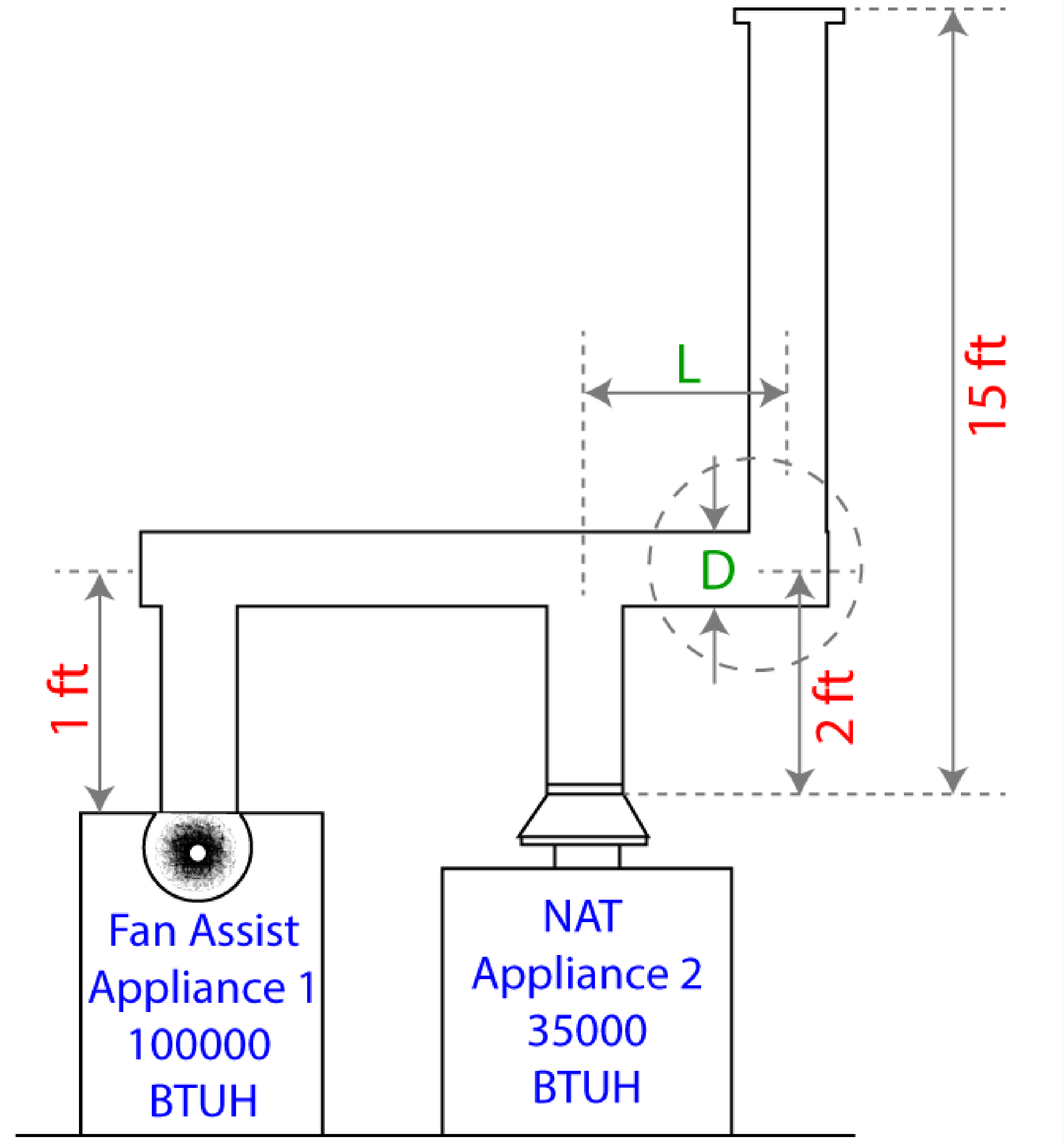
d.
5 inches (12.7 cm)

Feedback

Your answer is incorrect.

The correct answer is: 7 inches (17.78 cm)

Question text



From the above drawing that complies with 8.2.1 a or b, using double wall vent connectors, what is the maximum allowable distance for L ?

Select one:
a.
6 inches (15.24 cm)

b.
6 feet (1.83 cm)

c.
108 inches (228.6 cm)

d.
9 inches (2.05 m)

Feedback

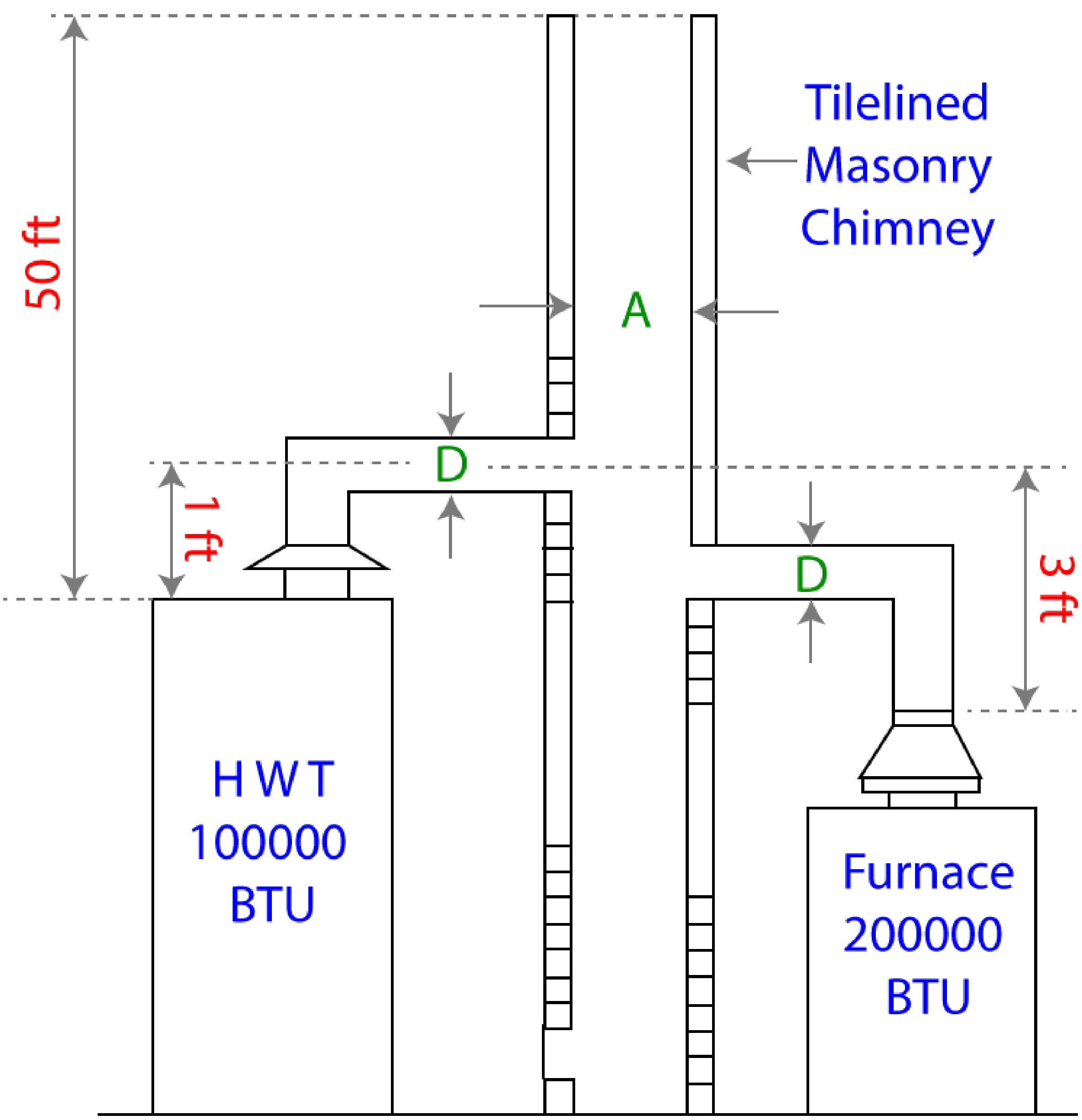
Your answer is incorrect.

The riser on the left is only 1' as compared to the riser on the right being 2'. Therefore the least vent height used to determine your vent size is 14' not 15' which results in using the 10' row.

The correct answer is: 108 inches (228.6 cm)

Question text

Referring to the drawing below (that doesn’t comply with 8.2.1 a or b), the minimum diameter of the single wall vent connector on the hot water tank is how many inches ?



Select one:

a.

6 inches (15.24 cm)

b.

4 inches (10.16 cm)

c.

5 inches (12.70 cm)

d.

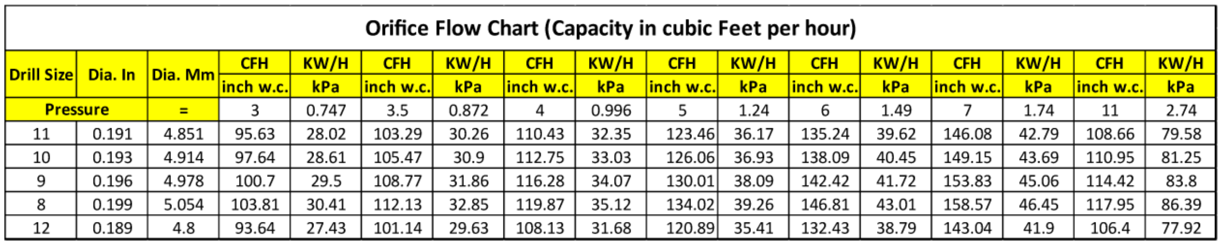
7 inches (17.78 cm)

Feedback

Your answer is incorrect.

The correct answer is: 6 inches (15.24 cm)

Question text



Orifice Flow Chart (Capacity in cubic Feet per hour)

Drill Size	Dia. In	Dia. Mm	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa
Pressure		=	3	0.747	3.5	0.872	4	0.996	5	1.24	6	1.49	7	1.74	11	2.74
11	0.191	4.851	95.63	28.02	103.29	30.26	110.43	32.35	123.46	36.17	135.24	39.62	146.08	42.79	108.66	79.58
10	0.193	4.914	97.64	28.61	105.47	30.9	112.75	33.03	126.06	36.93	138.09	40.45	149.15	43.69	110.95	81.25
9	0.196	4.978	100.7	29.5	108.77	31.86	116.28	34.07	130.01	38.09	142.42	41.72	153.83	45.06	114.42	83.8
8	0.199	5.054	103.81	30.41	112.13	32.85	119.87	35.12	134.02	39.26	146.81	43.01	158.57	46.45	117.95	86.39
12	0.189	4.8	93.64	27.43	101.14	29.63	108.13	31.68	120.89	35.41	132.43	38.79	143.04	41.9	106.4	77.92

An appliance, rated for 600,000 Btu/h (175.7 kW), is equipped with 5 burners and is firing on natural gas. C.V. = 1,050 Btu/ft.J (1 0.86 kW/m3) at 4 inches w.c. (996 Pa). In order to maintain its rated input, each orifice is what size ?

Select one:

a.
10

b.
8

c.
9

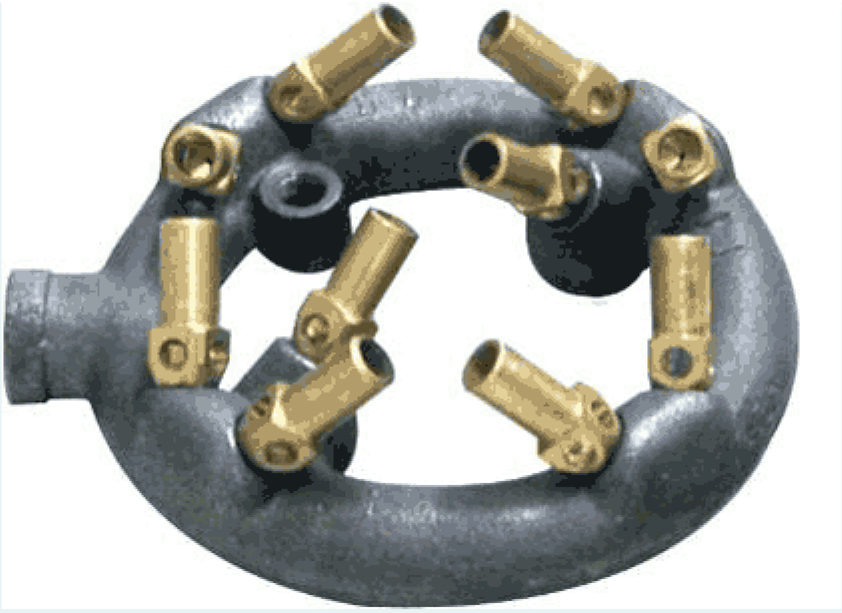
d.
11

Feedback

Your answer is incorrect.

The correct answer is: 10

Question text



To adjust the primary air on a barber tip burner (as used in commercial cooking equipment), you would

Select one:

a.

Primary air opening is fixed, no adjustment possible

b.

Install a larger orifice

c.

Turn the spoiler screw in or out

d.

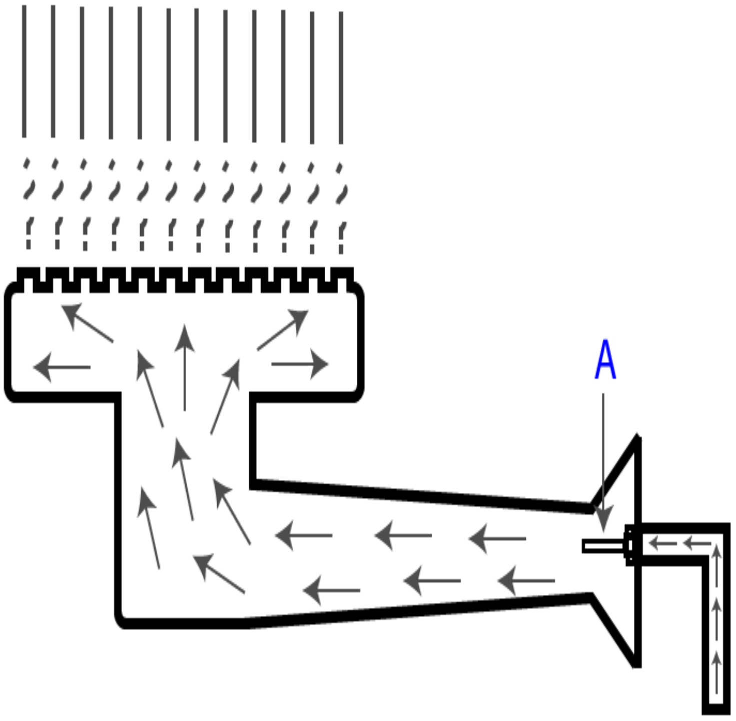
Turn the modified wing on the shutter

Feedback

Your answer is incorrect.

The correct answer is: Primary air opening is fixed, no adjustment possible

Question text



Referring to the above illustration, what would most likely happens if dirt caused a partial blockage in gas flow at A?

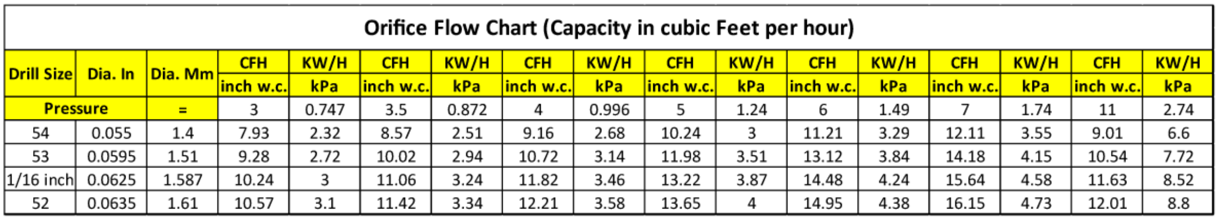
Select one:
a.
Flashback
b.
Luminous flames
c.
Flame lift-off
d.
Hard blue flames

Feedback

Your answer is correct.

The correct answer is: Flashback

Question text



Orifice Flow Chart (Capacity in cubic Feet per hour)

Drill Size	Dia. In	Dia. Mm	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H
			inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa
Pressure		=	3	0.747	3.5	0.872	4	0.996	5	1.24	6	1.49	7	1.74	11	2.74
54	0.055	1.4	7.93	2.32	8.57	2.51	9.16	2.68	10.24	3	11.21	3.29	12.11	3.55	9.01	6.6
53	0.0595	1.51	9.28	2.72	10.02	2.94	10.72	3.14	11.98	3.51	13.12	3.84	14.18	4.15	10.54	7.72
1/16 inch	0.0625	1.587	10.24	3	11.06	3.24	11.82	3.46	13.22	3.87	14.48	4.24	15.64	4.58	11.63	8.52
52	0.0635	1.61	10.57	3.1	11.42	3.34	12.21	3.58	13.65	4	14.95	4.38	16.15	4.73	12.01	8.8

A 100,000 Btu/h (29.29 kW) appliance with four burners is operating on propane with a manifold pressure of 11 inches w.c. (2.74 kpa). Each orifice is what size ?

Select one:

a.
43

b.
27

c.
50

d.
54

Feedback

Your answer is incorrect.

The correct answer is: 54

Question text

An induced draft appliance requires the use of

Select one:

a.
A blower on the flue outlet to draw combustion product from the system

b.
an atmospheric burner specifically designed to reduce any effects of draft on the combustion process

c.
a blower placed upstream of the burner to overcome any resistance created throughout the combustion chamber

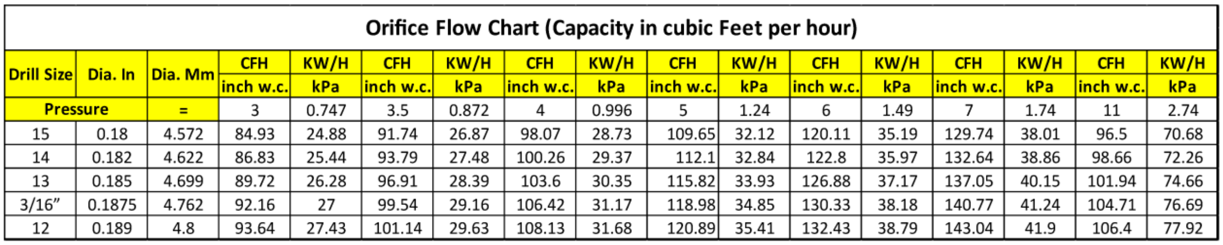
d.
A power burner capable of producing a ·slight pressure able to overcome the burner resistance

Feedback

Your answer is incorrect.

The correct answer is: A blower on the flue outlet to draw combustion product from the system

Question text



Orifice Flow Chart (Capacity in cubic Feet per hour)

Drill Size	Dia. In	Dia. Mm	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H
			inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa
Pressure		=	3	0.747	3.5	0.872	4	0.996	5	1.24	6	1.49	7	1.74	11	2.74
15	0.18	4.572	84.93	24.88	91.74	26.87	98.07	28.73	109.65	32.12	120.11	35.19	129.74	38.01	96.5	70.68
14	0.182	4.622	86.83	25.44	93.79	27.48	100.26	29.37	112.1	32.84	122.8	35.97	132.64	38.86	98.66	72.26
13	0.185	4.699	89.72	26.28	96.91	28.39	103.6	30.35	115.82	33.93	126.88	37.17	137.05	40.15	101.94	74.66
3/16"	0.1875	4.762	92.16	27	99.54	29.16	106.42	31.17	118.98	34.85	130.33	38.18	140.77	41.24	104.71	76.69
12	0.189	4.8	93.64	27.43	101.14	29.63	108.13	31.68	120.89	35.41	132.43	38.79	143.04	41.9	106.4	77.92

An appliance equipped with three burners **,** burning natural gas **;** C .V. = 1,000 Btu/Ft^3 (10.35 kW/rm^3) and operating at a manifold pressure of 3.5 inches w.c. (872 Pa), has a rated input of 300,000 Btu/h (87.87 kW). Each orifice is what size ? **(choose the best option)**

Select one:

a.
14

b.
3/16

c.
12

d.
13

Feedback

Your answer is incorrect.

The correct answer is: 3/16

Question text

An appliance has an input of 250,000 Btu/h (73.2 kW), with an 80% efficiency. The correct output is closest to

Select one:

a.
200000 Btu (58.56 kW)

b.
32222 Btu (9.44 kW)

c.
322222 Btu (94.38 kW)

d.
20000 Btu (5.86 kW)

Feedback

Your answer is incorrect.

The correct answer is: 200000 Btu (58.56 kW)

Question text

A pilot that burns at low turndown throughout the entire time the burner is in service, whether or not the main burner is firing, except that upon a call for heat the fuel flow to the pilot is automatically increased to produce a flame which will reliably ignite the main burner fuel, is a good definition of a

Select one:
a.
Interrupted pilot
b.
Expanding pilot

c.
Continuous pilot
d.
Intermittent pilot

Feedback

Your answer is incorrect.

The correct answer is: Expanding pilot

Question text

A noisy , lifting , blowing pilot flame is usually caused by

Select one:
a.
A partially blocked pilot orifice

b.
A lack of secondary air

c.
Too large of a pilot orifice

d.
High gas pressure

Feedback

Your answer is incorrect.

The correct answer is: High gas pressure

Question text

A forced warm air furnace equipped with an atmospheric burner, is found to have an above normal quantity of carbon monoxide in the flue products. Clocking the furnace indicates the input is incorrect. This first step to correct this problem would be to

Select one:

a.

Adjust the primary air shutters

b.

Increase the air supply to the burner

c.

Correct the input to the burner

d.

Increase the air supply to the furnace room

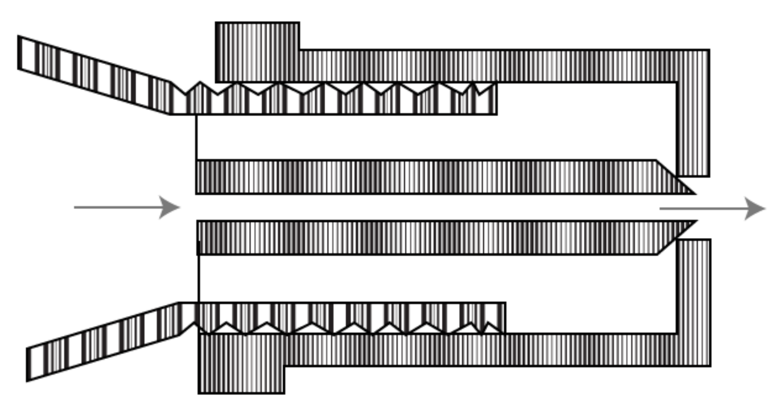
Feedback

Your answer is incorrect.

The correct answer is: Correct the input to the burner

Question text

In the diagram illustrated below, the orifice is adjusted for:



Select one:

a.

butane operation

b.

Not Adjustable

c.
propane operation

d.
natural gas operation

Feedback

Your answer is incorrect.

The correct answer is: propane operation

Question text

If the cross-sectional area of an orifice is doubled, the flow rate will be increased by

Select one:
a.
Twice the original flow rate
b.
Four times the original flow rate

c.
Half the original flow rate

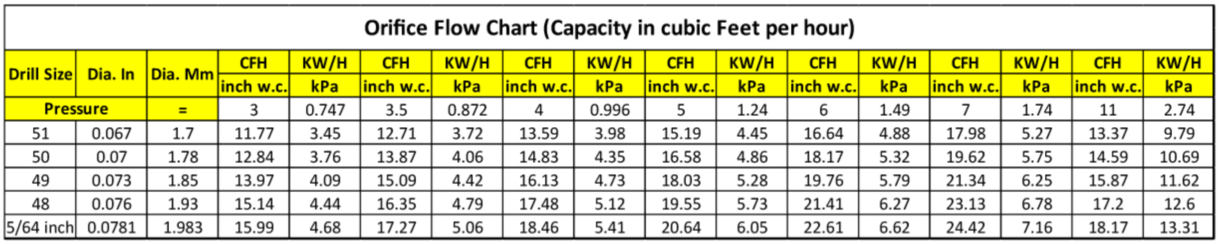
d.
Eight times the original flow rate

Feedback

Your answer is incorrect.

The correct answer is: Twice the original flow rate

Question text



Orifice Flow Chart (Capacity in cubic Feet per hour)

Drill Size	Dia. In	Dia. Mm	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa
Pressure		=	3	0.747	3.5	0.872	4	0.996	5	1.24	6	1.49	7	1.74	11	2.74
51	0.067	1.7	11.77	3.45	12.71	3.72	13.59	3.98	15.19	4.45	16.64	4.88	17.98	5.27	13.37	9.79
50	0.07	1.78	12.84	3.76	13.87	4.06	14.83	4.35	16.58	4.86	18.17	5.32	19.62	5.75	14.59	10.69
49	0.073	1.85	13.97	4.09	15.09	4.42	16.13	4.73	18.03	5.28	19.76	5.79	21.34	6.25	15.87	11.62
48	0.076	1.93	15.14	4.44	16.35	4.79	17.48	5.12	19.55	5.73	21.41	6.27	23.13	6.78	17.2	12.6
5/64 inch	0.0781	1.983	15.99	4.68	17.27	5.06	18.46	5.41	20.64	6.05	22.61	6.62	24.42	7.16	18.17	13.31

A natural gas boiler is equipped with 20 burners and fires at a manifold pressure of 3.5 inch water column. It is determined with the use of orifice drills that each orifice is a No 50. The calorific value of gas burned is 1070 Btu/Ft^3. The firing rate of the boiler will be closest to:

Select one:
a.
15000 Btu

b.

257000 Btu

c.
298000 Btu

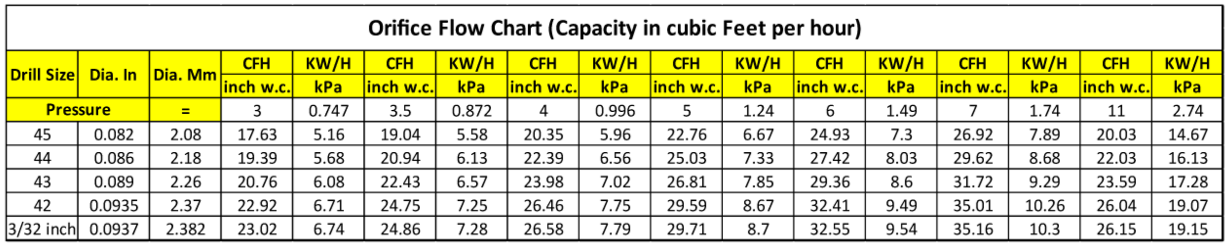
d.
278000 Btu

Feedback

Your answer is incorrect.

The correct answer is: 298000 Btu

Question text



Orifice Flow Chart (Capacity in cubic Feet per hour)

Drill Size	Dia. In	Dia. Mm	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa	CFH inch w.c.	KW/H kPa
Pressure		=	3	0.747	3.5	0.872	4	0.996	5	1.24	6	1.49	7	1.74	11	2.74
45	0.082	2.08	17.63	5.16	19.04	5.58	20.35	5.96	22.76	6.67	24.93	7.3	26.92	7.89	20.03	14.67
44	0.086	2.18	19.39	5.68	20.94	6.13	22.39	6.56	25.03	7.33	27.42	8.03	29.62	8.68	22.03	16.13
43	0.089	2.26	20.76	6.08	22.43	6.57	23.98	7.02	26.81	7.85	29.36	8.6	31.72	9.29	23.59	17.28
42	0.0935	2.37	22.92	6.71	24.75	7.25	26.46	7.75	29.59	8.67	32.41	9.49	35.01	10.26	26.04	19.07
3/32 inch	0.0937	2.382	23.02	6.74	24.86	7.28	26.58	7.79	29.71	8.7	32.55	9.54	35.16	10.3	26.15	19.15

A natural gas appliance has a rated input of 143 MBH. If the appliance has four burners and operates at a manifold pressure of 7 inches water column the correct installed orifice would be: **(choose best option)**

Select one:
a.
No 13

b.
No 42

c.
No 41

d.
No 3/32

Feedback

Your answer is incorrect.

The correct answer is: No 3/32

Question text

An appliance equipped with nine burners using natural gas with a manifold pressure of 3.5 inches water column, has a rated input of 200 MBH. Select the orifices required from the orifice sizing table in the B 149.1 gas code.

Select one:
a.
No 42

b.
3/32 of an inch

c.
No 43

d.
No 44

Feedback

Your answer is incorrect.

The correct answer is: No 43

Question text

When converting an appliance from propane to natural gas, a gas fitter would

Select one:
a.
Increase manifold pressure and orifice size
b.
Increase manifold pressure and reduce orifice size
c.
Reduce manifold pressure and increase orifice size
d.
Reduce manifold pressure and orifice size

Feedback

Your answer is incorrect.

The correct answer is: Reduce manifold pressure and increase orifice size

Question text

A 375 MBH appliance which is operated on propane, has four burners fired at 11 inches manifold pressure. Select the orifices size required from the orifice sizing table in the B 149.1 gas code (I.3).

Select one:
a.
No 36

b.
No 33

c.
No 34

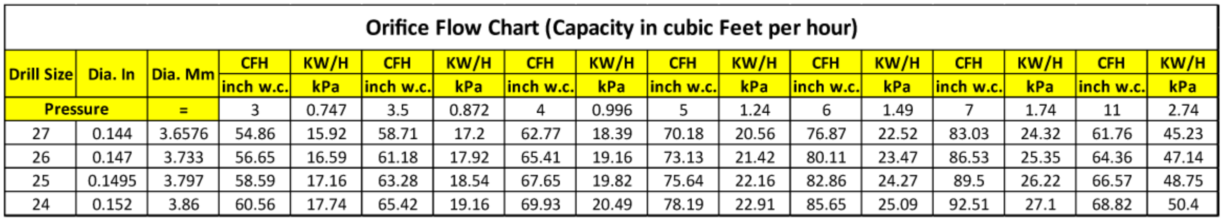
d.
7/64 inch

Feedback

Your answer is incorrect.

The correct answer is: No 33

Question text



Orifice Flow Chart (Capacity in cubic Feet per hour)

Drill Size	Dia. In	Dia. Mm	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H
			inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa
Pressure		=	3	0.747	3.5	0.872	4	0.996	5	1.24	6	1.49	7	1.74	11	2.74
27	0.144	3.6576	54.86	15.92	58.71	17.2	62.77	18.39	70.18	20.56	76.87	22.52	83.03	24.32	61.76	45.23
26	0.147	3.733	56.65	16.59	61.18	17.92	65.41	19.16	73.13	21.42	80.11	23.47	86.53	25.35	64.36	47.14
25	0.1495	3.797	58.59	17.16	63.28	18.54	67.65	19.82	75.64	22.16	82.86	24.27	89.5	26.22	66.57	48.75
24	0.152	3.86	60.56	17.74	65.42	19.16	69.93	20.49	78.19	22.91	85.65	25.09	92.51	27.1	68.82	50.4

Which orifice would have the highest flow rate ?

Select one:
a.
No 25 @ 4 inch w.c

b.
No 24 @ 3 inch w.c

c.
No 24 @ 4 inch w.c

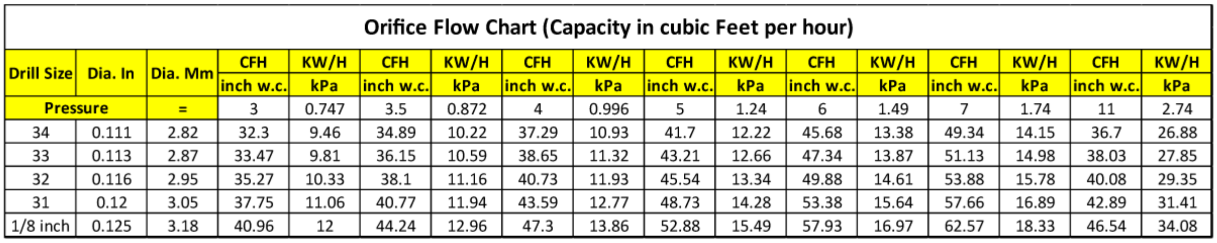
d.
No 25 @ 3 inch w.c

Feedback

Your answer is incorrect.

The correct answer is: No 24 @ 4 inch w.c

Question text



Orifice Flow Chart (Capacity in cubic Feet per hour)

Drill Size	Dia. In	Dia. Mm	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H	CFH	KW/H
			inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa	inch w.c.	kPa
Pressure		=	3	0.747	3.5	0.872	4	0.996	5	1.24	6	1.49	7	1.74	11	2.74
34	0.111	2.82	32.3	9.46	34.89	10.22	37.29	10.93	41.7	12.22	45.68	13.38	49.34	14.15	36.7	26.88
33	0.113	2.87	33.47	9.81	36.15	10.59	38.65	11.32	43.21	12.66	47.34	13.87	51.13	14.98	38.03	27.85
32	0.116	2.95	35.27	10.33	38.1	11.16	40.73	11.93	45.54	13.34	49.88	14.61	53.88	15.78	40.08	29.35
31	0.12	3.05	37.75	11.06	40.77	11.94	43.59	12.77	48.73	14.28	53.38	15.64	57.66	16.89	42.89	31.41
1/8 inch	0.125	3.18	40.96	12	44.24	12.96	47.3	13.86	52.88	15.49	57.93	16.97	62.57	18.33	46.54	34.08

A propane air mixture has a specific gravity of 1.3 and a calorific value of 1250 Btu/ft$^{3.}$ If an appliance has a rated input of 200 MBH and has five burners operating on 4 inches manifold pressure , what is the required orifice size ?

Select one:

a.
No 34

b.
No 33

c.
No 1/8"

d.
No 31

Feedback

Your answer is incorrect.

The correct answer is: No 31

Question text

Which of the following items determine the firing rate of an atmospheric burner ?

Select one:

a.
The orifice size and the pipe size

b.
The orifice size and the pressure

c.
The pressure and the correct amount of air

d.
The orifice size and the primary air

Feedback

Your answer is incorrect.

The correct answer is: The orifice size and the pressure

Question text

A boiler certified for high altitude is installed at an elevation of 5400 feet. The rating plate indicates a sea level rating of 150,000 Btuh and a high altitude rating of 130,000 Btuh. The boiler should be adjusted to an input of

Select one:

a.

130000 Btuh

b.
124800 Btuh

c.
109200 Btuh

d.
150000 Btuh

Feedback

Your answer is incorrect.

The correct answer is: 124800 Btuh

Question text

To double the gas flow through the orifice of an atmospheric burner , the manifold pressure shall be increased by

Select one:
a.
50 **%**

b.
three times

c.
double

d.
four times

Feedback

Your answer is incorrect.

The correct answer is: four times

Question text

A lifting flame can best be eliminated by

Select one:
a.
Increasing the amount of primary air
b.
Decreasing the amount of secondary air
c.
Increasing the amount of secondary air
d.
Decreasing the amount of primary air

Feedback

Your answer is incorrect.

The correct answer is: Decreasing the amount of primary air

Question text

If flashback is occurring in an atmospheric burner, the corrective action required would be to

Select one:

a.
Increase the primary air and decrease the gas pressure

b.
Clean the burner and decrease the gas pressure

c.
Decrease the primary air and increase the gas pressure

d.
Clean the burner and increase the primary air

Feedback

Your answer is incorrect.

The correct answer is: Decrease the primary air and increase the gas pressure

Question text

The test dials are timed on a gas meter that is recording a flow rate of gas at pressure more than 1/2 PSIG (3.45 kPa). If no allowance is made for the compression of the gas, the volume of flow indicated by the test dials will

Select one:

a.
Indicated the unit is over-fired

b.
Indicate the unit is under-fired

c.
Be the volume of fuel gas expressed in SCFH entering the combustion chamber

d.
Indicate the exact Btu input to the combustion chamber

Feedback

Your answer is incorrect.

The correct answer is: Indicate the unit is under-fired

Question text

A furnace fired on natural gas is clocked at 20 seconds for one revolution of a 0.05 cubic meter test dial. The pressure of the gas in the meter is 7 inches w.c. (1.74 kPa). Calorific value = 1000 Btu/ft^3 (10.35 kW/m^3). The correct input is closest to

Select one:

a.

320000 Btu/h (93.6 kW)

b.

93.15 Btu/h (0.027 kW)

c.

90000 Btu/h (26.4 kW)

d.

9000 Btu/h (2.63 kW)

Feedback

Your answer is incorrect.

The correct answer is: 320000 Btu/h (93.6 kW)

Question text

A 5 cubic foot test dial takes 30 seconds to make 1 complete revolution. The correct flow rate is closest to

Select one:

a.

600 cubic feet / hour (16.80 m^3)

b.

750 cubic feet / hour (21.24 m^3)

c.

120 cubic feet / hour (3.36 m^3)

d.

30 cubic feet / hour (0.85 m^3)

Feedback

Your answer is incorrect.

The correct answer is: 600 cubic feet / hour (16.80 m^3)

Question text

A low pressure meter set require 32 seconds for a 0.05 m^3 test dial to make one revolution. The calorific value of the gas is 1000 Btu/cu.ft. The closest correct input is :

Select one:

a.

56,250 Btu/h

b.
1,986,948 Btu/h

c.
200,000 Btu/h

d.
582,000 Btu/h

Feedback

Your answer is incorrect.

The correct answer is: 200,000 Btu/h

Question text

A propane meter revolves in 25 seconds for a 1 cubic foot dial, propane cv = 2500 Btu/ft^3 . The correct input is closest to :

Select one:
a.
325451 Btu/h (95.32 kW)

b.
403200 Btu/h (118.09 kW)

c.
360000 Btu/h (105.44 kW)

d.
151200 Btu/h (44.28 kW)

Feedback

Your answer is incorrect.

The correct answer is: 360000 Btu/h (105.44 kW)

Question text

A furnace rated at 250000 Btu/h (73.23 kW) is fired on natural gas c.v = 1000 Btu/cu.ft (10.35 kW/m^3). How long will it take the 5 cubic foot test dial to make one complete revolution ?

Select one:
a.
72 seconds

b.
100 seconds

c.
18 seconds

d.

180 seconds

Feedback

Your answer is incorrect.

The correct answer is: 72 seconds

Question text

The correction factor of 1.679 would be used for a system operating at

Select one:
a.
2 PSIG (14 kPa)

b.
20 PSIG (140 kPa)

c.
5 PSIG (34 kPa)

d.
10 PSIG (70 kPa)

Feedback

Your answer is incorrect.

The correct answer is: 10 PSIG (70 kPa)

Question text

Calculate the input for the following natural gas appliance

- Calorific value of gas = 1000 Btu/cu.ft (10.35 kW/m^3)
- Meter pressure = 7 inches w.c. (1.74 kPa)
- Manifold pressure = 5 inches w.c. (1.24 kPa)
- Local atmospheric pressure = 14.68 PSIA
- Test dial = 1 cu.ft

One revolution of the test dial takes 31.5 seconds. The clocked input is closest to which one of the following inputs ?

Select one:
a.
119999 Btu/h (35.15 kW)

b.
115428 Btu/h (33.81 kW)

c.
116129 Btu/h (34.01 kW)

d.
114285 Btu/h (33.47 kW)

Feedback

Your answer is incorrect.

The correct answer is: 114285 Btu/h (33.47 kW)

Question text

Calculate the input to an appliance by using the following information

- Local atmospheric pressure = 14.60 PSIA
- Gas service line pressure = 60 PSIG
- Gas pressure through the meter = 10 PSIG
- House line pressure = 2 PSIG
- Appliance manifold pressure = 5 inches w.c
- Test dial = 0.05 m^3

Test dial complete one revolution in 1 minute. Calorific value of gas = 1000 Btu/cu.ft (10.35 kW/m^3). The correct input is closest to which one of the following units ?

Select one:
a.
536000 Btu/h (156.9 kW)

b.
106000 Btu/h (31 kW)

c.
300000 Btu/h (87.9 kW)

d.
177000 Btu/h (51.8 kW)

Feedback

Your answer is incorrect.

The correct answer is: 177000 Btu/h (51.8 kW)

Question text

Calculate the input to the following boiler. The boiler is rated at 1,000,000 Btu/h (292.9 kW). It has four burners and operates at a manifold pressure of 7 inches w.c. (1.74 kPa) with a meter pressure of 5 psi. The 0.1 Cu m/rev test dial took 26 seconds to make one revolution. The fuel is a natural gas with a calorific value of 1050 Btu/c.f. (10.84kW/m^3). The building is at sea level (14.73 PSIA). Choose the nearest applicable input.

Select one:
a.

520000 Btu/h (152kW)

b.
750000 Btu/h (220 kW)

c.
490000 Btu/h (143kW)

d.
686000 Btu/h (201 kW)

Feedback

Your answer is incorrect.

The correct answer is: 686000 Btu/h (201 kW)

Question text

The purpose of clocking a meter by a gas fitter is

Select one:
a.
To determine how much gas an appliance consumed per hour
b.
To see how long it takes the test dial to go around

c.
To check how much gas is consumed in a month for billing purposes

d.
Solely used as a gas leak check

Feedback

Your answer is incorrect.

The correct answer is: To determine how much gas an appliance consumed per hour

Question text

Which type of meter corrects its consumption dials for selling pressure only ?

Select one:
a.
PFM

b.
BTM

c.
BPI

d.
BVI

Feedback

Your answer is incorrect.

The correct answer is: BPI

Question text

Determine the number of seconds for one revolution of a 2 cubic foot test dial if the input is 302400 Btuh the meter pressure is 7 inches water column and the gas used has a calorific value of 1050 Btu/ft^3

Select one:
a.
23.8 seconds

b.
4 seconds

c.
28.5 seconds

d.
25 seconds

Feedback

Your answer is incorrect.

The correct answer is: 25 seconds

Question text

A furnace fired on propane is clocked at 22 seconds on a 0.5 ft^3 test dial. The meter is on low pressure. Its input will be closest to

Select one:
a.
2045000 Btu/h

b.
818000 Btu/h

c.
204545 Btu/h

d.
82000 Btu/h

Feedback

Your answer is incorrect.

The correct answer is: 204545 Btu/h

Question text

A burner fired on a 50 % butane-air mixture clocked at 48 seconds on a 2 ft^3 test dial. The meter is at 5 PSIG. Its input will be closest to

Select one:
a.
480000 Btu/h

b.
321000 Btu/h

c.
643000 Btu/h

d.
240000 Btu/h

Feedback

Your answer is incorrect.

The correct answer is: 321000 Btu/h

Question text

Determine the input under the following conditions (choose closest answer) :

- Service pressure = 60 PSIG
- Local atmospheric pressure = 13.38 PSIA
- Seconds / revolution = 18
- Meter pressure = 5 PSIG
- Manifold pressure = 7 inches water column
- Test dial = 0.05 m^3 / revolution
- Building line pressure = 2 PSIG
- Truck in driveway = Green
- Weather = Partly cloudy
- Gas = 1050 Btu/Ft^3

Select one:
a.
496000 Btuh

b.
420000 Btuh

c.
131000 Btuh

d.
463000 Btuh

Feedback

Your answer is incorrect.

The correct answer is: 463000 Btuh

Question text

Calculate the input (to closest answer) using the following information:

- Service pressure = 60 PSIG
- Meter pressure = 5 PSIG
- Manifold pressure = 3.5 inches water column
- Test dial size = 5 ft^3
- Second / revolution = 20
- C.V = 1000 Btu/ft^3

Select one:

a.
6300000 Btuh

b.
1205000 Btuh

c.
4566000 Btuh

d.
900000 Btuh

Feedback

Your answer is incorrect.

The correct answer is: 1205000 Btuh

Question text

A low-pressure meter set measuring natural gas requires 32 seconds for a 1/2 cubic meter test dial to make one revolution. The correct input is closest to

Select one:

a.
56250 kW

b.
582 Btuh

c.
56.25 Btuh

d.
582 kW

Feedback

Your answer is incorrect.

The correct answer is: 582 kW

After replacing a hot water tank rated at 36000 Btuh the gas fitter must clock it. However the furnace must stay on throughout the clocking procedure. Clocking only the furnace (rated at 120000 Btuh) , the test dial takes 150 seconds for one revolution (5 ft^3 T.D). With both units firing the time per revolution drops to 116 seconds. If the meter is low pressure meter , we can conclude that

Select one:

a.
The hot water tank is overfired

b.
The installation is acceptable

c.
Both units need converting

d.
The furnace is overfired

Feedback

Your answer is incorrect.

The correct answer is: The installation is acceptable

Question text

An appliance fired on low pressure natural gas takes 27 seconds for one revolution of a 0.05 m^3 test dial. Its input will be closest to

Select one:

a.
235000 Btuh

b.
167000 Btuh

c.
6.67 kW

d.
13.24 kW

Feedback

Your answer is incorrect.

The correct answer is: 235000 Btuh

Question text

An appliance is clocked on a 2 PSIG meter set without correcting for the pressure. The result will be

Select one:

a.
The appliance will appear to be overfired

b.
The appliance will appear to the underfired

c.
There is no need to clock any appliance is 2 PSIG gas is used

d.
The appliance clocked input will be correct

Feedback

Your answer is incorrect.

The correct answer is: The appliance will appear to the underfired

Question text

A 200000 Btu/h natural gas furnace is fired on natural gas with a calorific value of 1000 Btu/cu.ft. The supply pressure is 7 inches w.c. With the furnace operating , the meter is clocked and it takes 30 seconds for the 2 cu.ft test dial to make 1 complete revolution. Referring to the above information, which one of the following statement is correct ?

Select one:

a.
The furnace is under-fired and the orifice size will have to be increased

b.
The furnace is over-fired and the orifice size will have to be decreased

c.
The furnace is firing at the correct input

d.
The furnace is over-fired and the orifice size will have to be increased

Feedback

Your answer is incorrect.

The correct answer is: The furnace is over-fired and the orifice size will have to be decreased

Question text

A furnace is certified to operate on propane with an input of 375,000 Btu/hat 10 inches w.c. The gas has a calorific value of 2,500 Btu/cu.ft. With the furnace operating, the meter is clocked and it takes 30 seconds for the 1 cubic foot test dial to make one complete revolution. From this, you can conclude that the appliance is

Select one:
a.
Over-fired by 20 %

b.
Firing at the correct input

c.
Under-fired by 20 %

d.
Under-fired by 80 %

Feedback

Your answer is incorrect.

The correct answer is: Under-fired by 20 %

Question text

If the millivolt reading produced by a thermocouple is less than 7 millivolts and the magnet will not hold in

Select one:
a.
Change the thermocouple

b.
Increase the high limit setting

c.
Reduce the input to the pilot

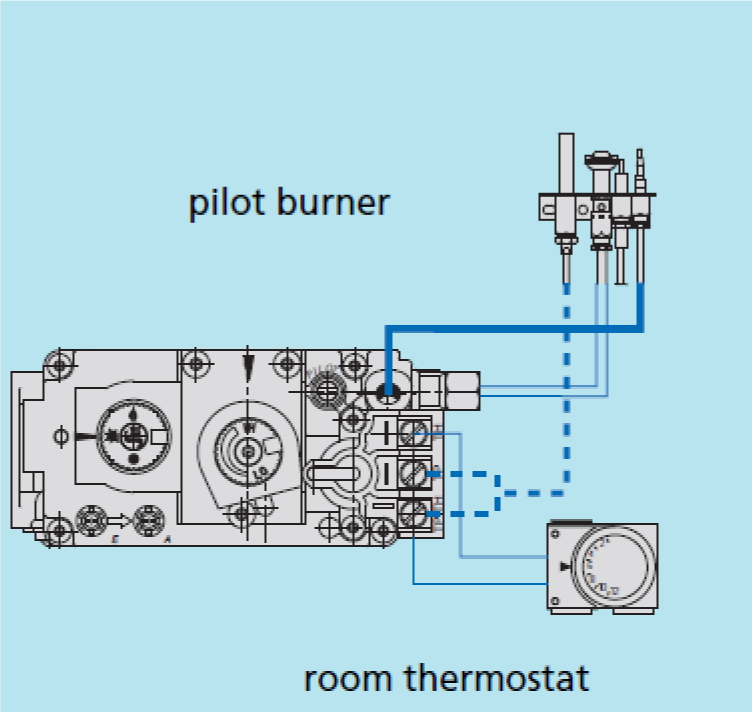
d.
Change the magnet

Feedback

Your answer is incorrect.

The correct answer is: Change the thermocouple

Referring to the drawing below all readings and meter checks should be made with the



Select one:

a.
Thermostat ON and calling for heat

b.
Pilot generator disconnected from the gas valve

c.
High limit in the open position

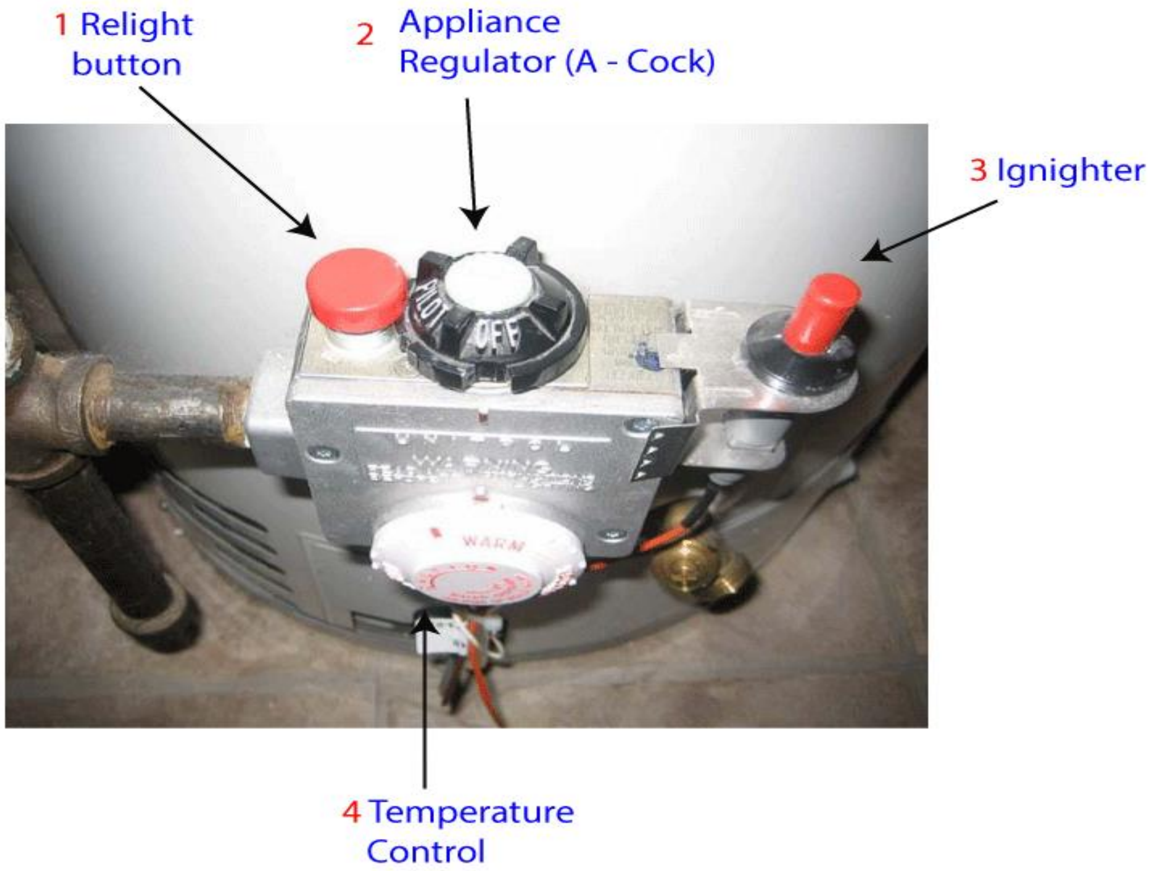
d.
Thermostat OFF

Feedback

Your answer is incorrect.

The correct answer is: Thermostat ON and calling for heat

Question text



Identify the correct components in the above drawings

Select one:
a.
No 1 = thermocouple connection

b.
No 4 = temperature control knob

c.
No 1 = temperature sensor

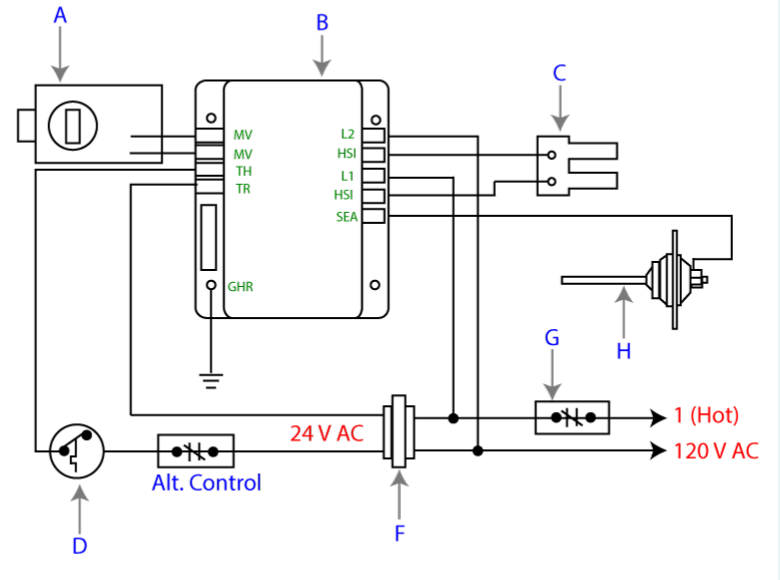
d.
No 4 =thermostat

Feedback

Your answer is incorrect.

The correct answer is: No 4 = temperature control knob

Question text



In the above drawing , what does item A indicate ?

Select one:

a.
Ignition module

b.
Power supply (120V AC)

c.
Gas valve

d.
Limit control

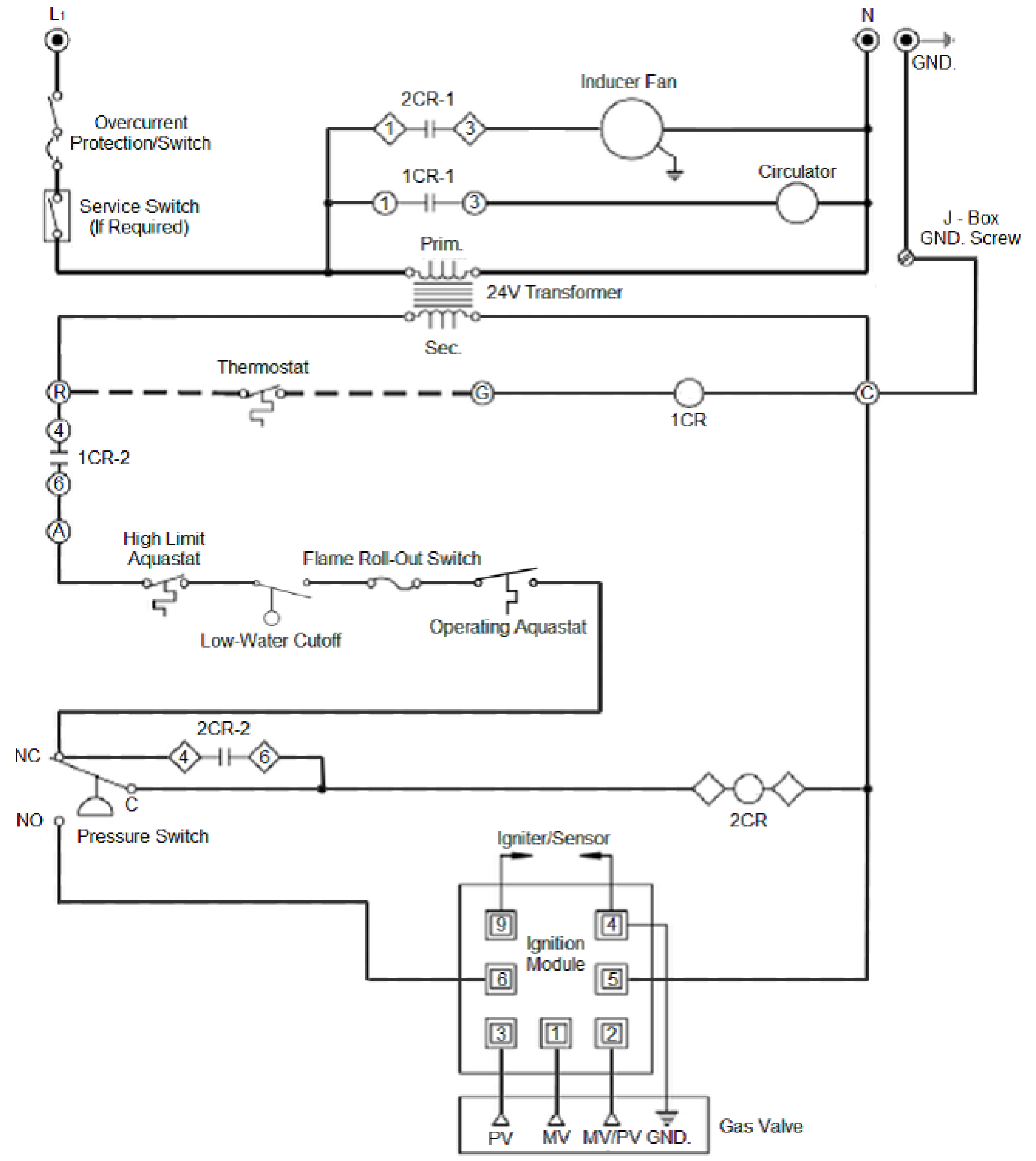
Feedback

Your answer is incorrect.

The correct answer is: Gas valve

Question text

On a call for heat, when the thermostat contacts close, the next sequence is the



Select one:

a.

Air proving switch closes, powering the combustion air blower relay

b.

Relay coil number 1 is energized , powering the circulator.

c.

Spark ignition and pilot valves are energized

d.
Blower motor is energized as soon as the pilot has been proven

Feedback

Your answer is incorrect.

The correct answer is: Relay coil number 1 is energized , powering the circulator.

Question text

On a 24V control system the S S O valve electromagnet receives its power from the

Select one:
a.
Photocell

b.
Thermopile

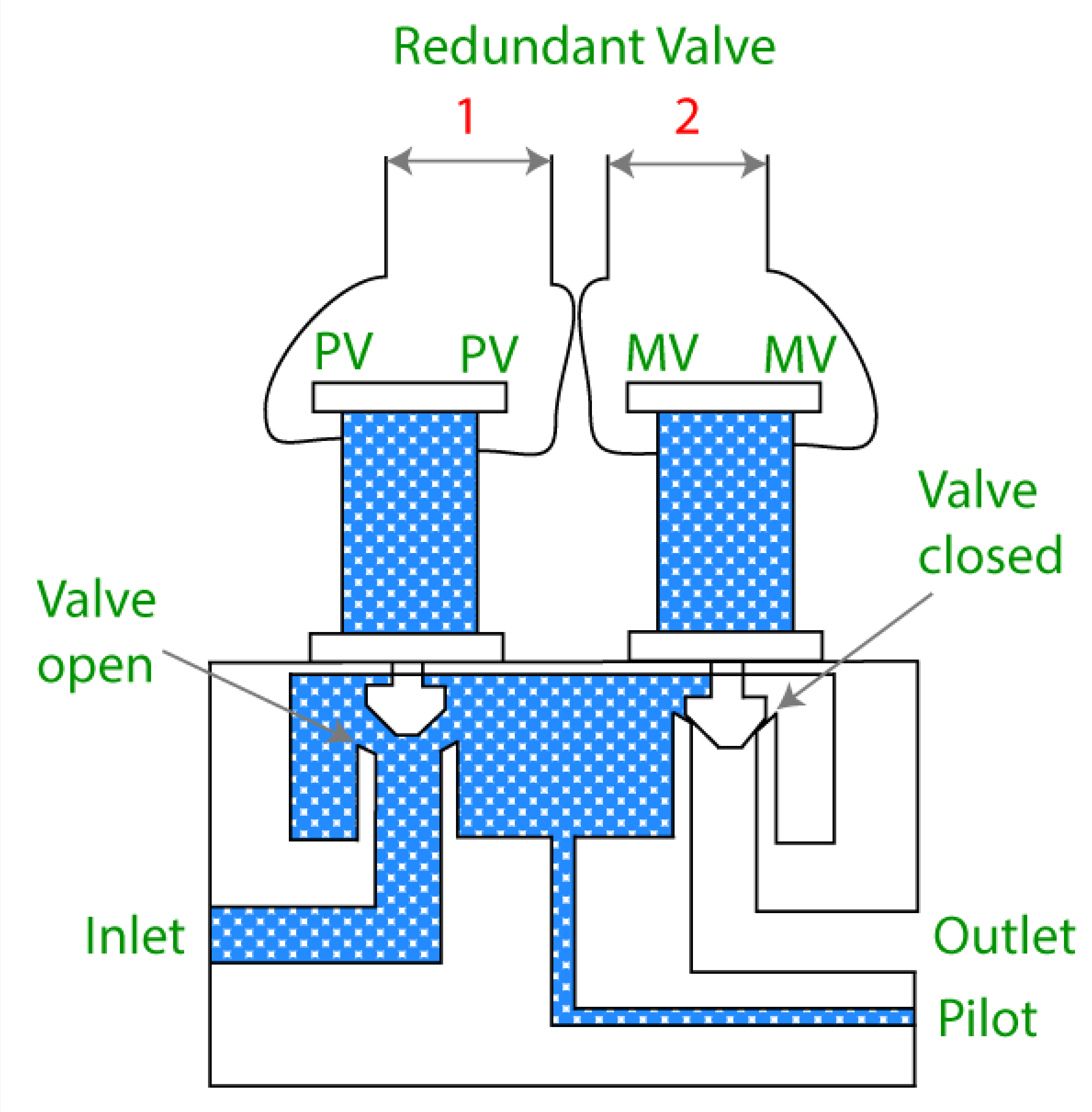
c.
Transformer
d.
Thermocouple

Feedback

Your answer is incorrect.

The correct answer is: Thermocouple

Question text



Referring to the above drawing , what voltages would you expect to read at points 1 (PV-PV) and 2 (MV-MV) (the maximum voltage available is 24 volts) ?

Select one:

a.

1 = 12 volts , 2 = 24 volts

b.

1 = 24 volts , 2 = 0 volts

c.

1 = 0 volts , 2 = 0 volts

d.

1 = 24 volts , 2 = 24 volts

Feedback

Your answer is incorrect.

The correct answer is: 1 = 24 volts , 2 = 0 volts

Question text

A single thermocouples primary purpose is to

Select one:

a.
Supply power to the thermostat

b.
Supply milliwatts

c.
Give 100 % safety

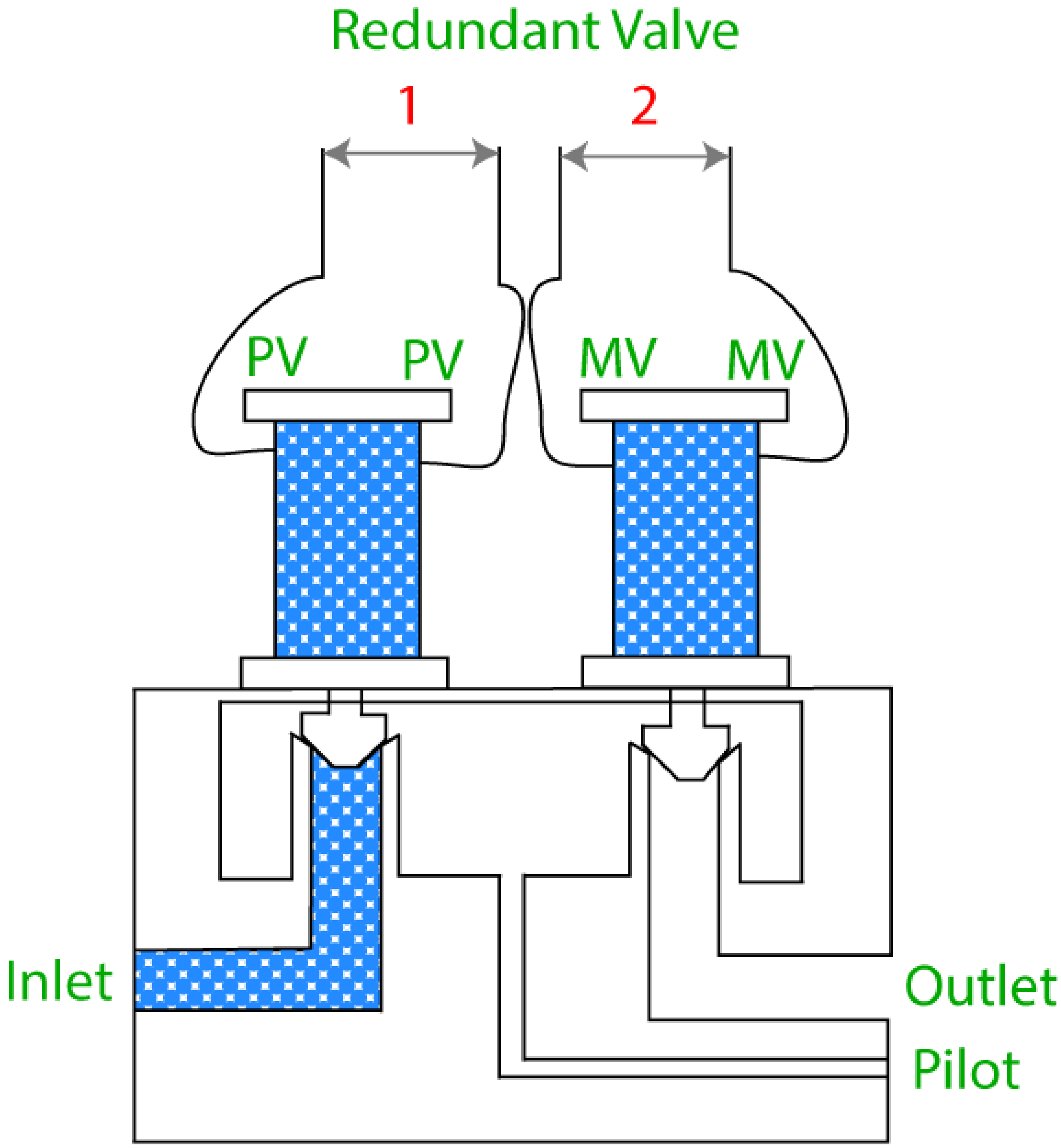
d.
Prove that the pilot is lit

Feedback

Your answer is incorrect.

The correct answer is: Prove that the pilot is lit

Question text



Referring to the above drawing what voltages would you expect to read at points 1 (PV - PV) and 2 (MV - MV) (the maximum voltage available is 24 volts) ?

Select one:

a.

1 = 24 volts , 2 = 24 volts

b.

1 = 24 volts , 2 = 0 volts

c.

1 = 0 volts , 2 = 0 volts

d.
1 = 12 volts , 2 = 24 volts

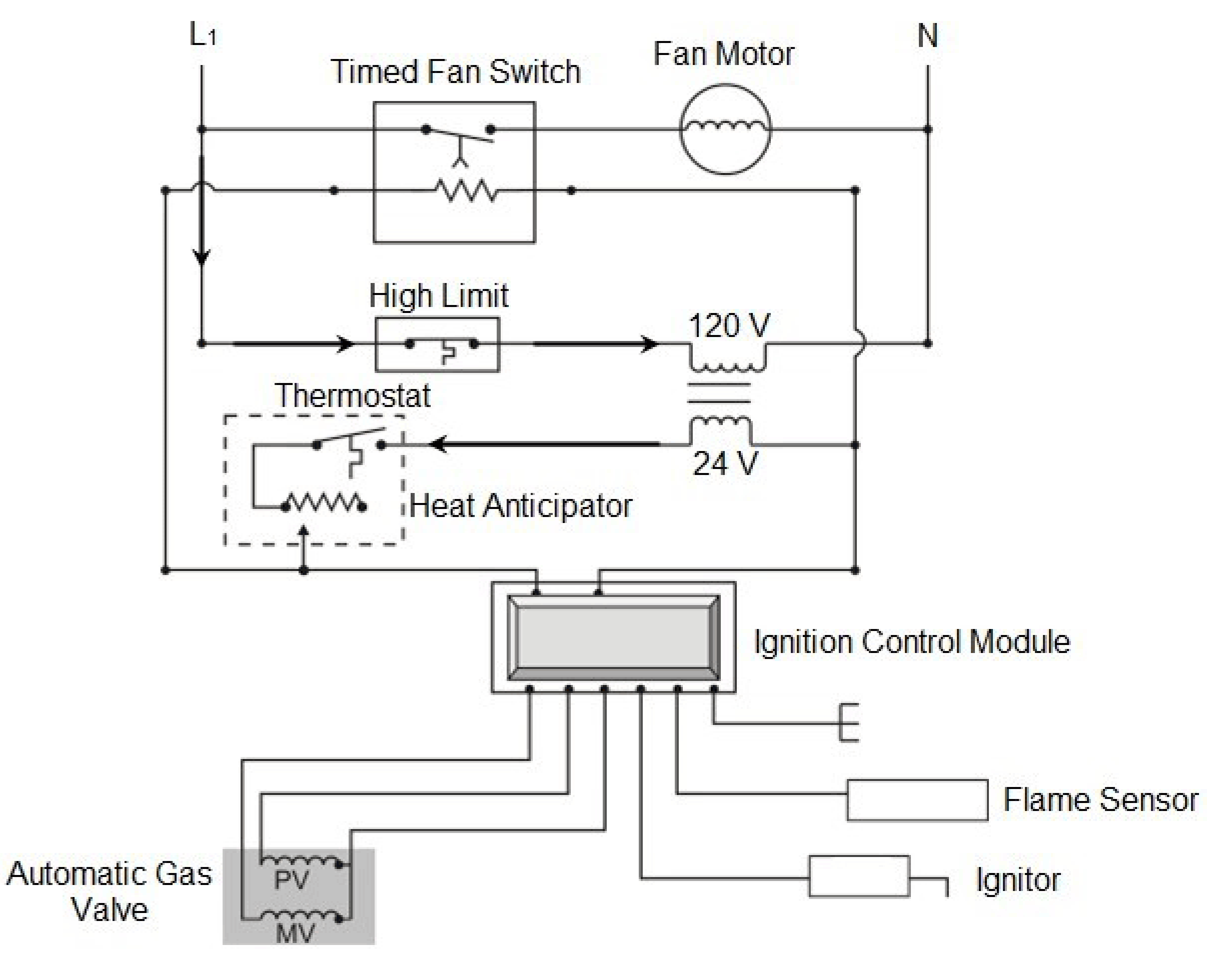
Feedback

Your answer is incorrect.

The correct answer is: 1 = 0 volts , 2 = 0 volts

Question text

Referring to the image below , this is an example of which one of the following control systems ?



Select one:
a.
An intermittent pilot ignition system

b.

A flame safe guard for standing pilots

c.
An direct hot surface ignition system

d.
A direct spark ignition system

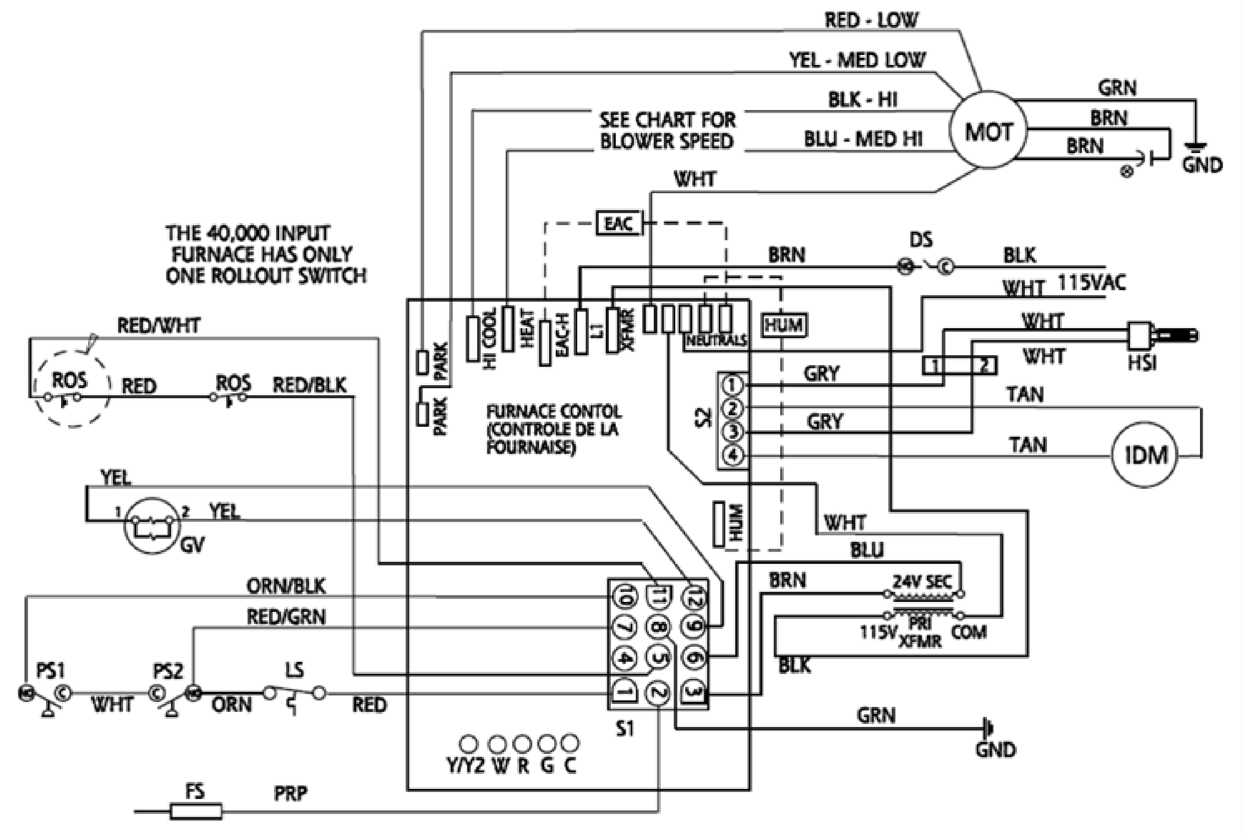
Feedback

Your answer is incorrect.

The correct answer is: An intermittent pilot ignition system

Question text

Referring to the below diagram , the voltage supplied to the igniter is



Select one:
a.
Millivolts as long as the unit is running

b.
120 volts AC during the ignition cycle only

c.
24 volts DC from the ignition module during the ignition cycle

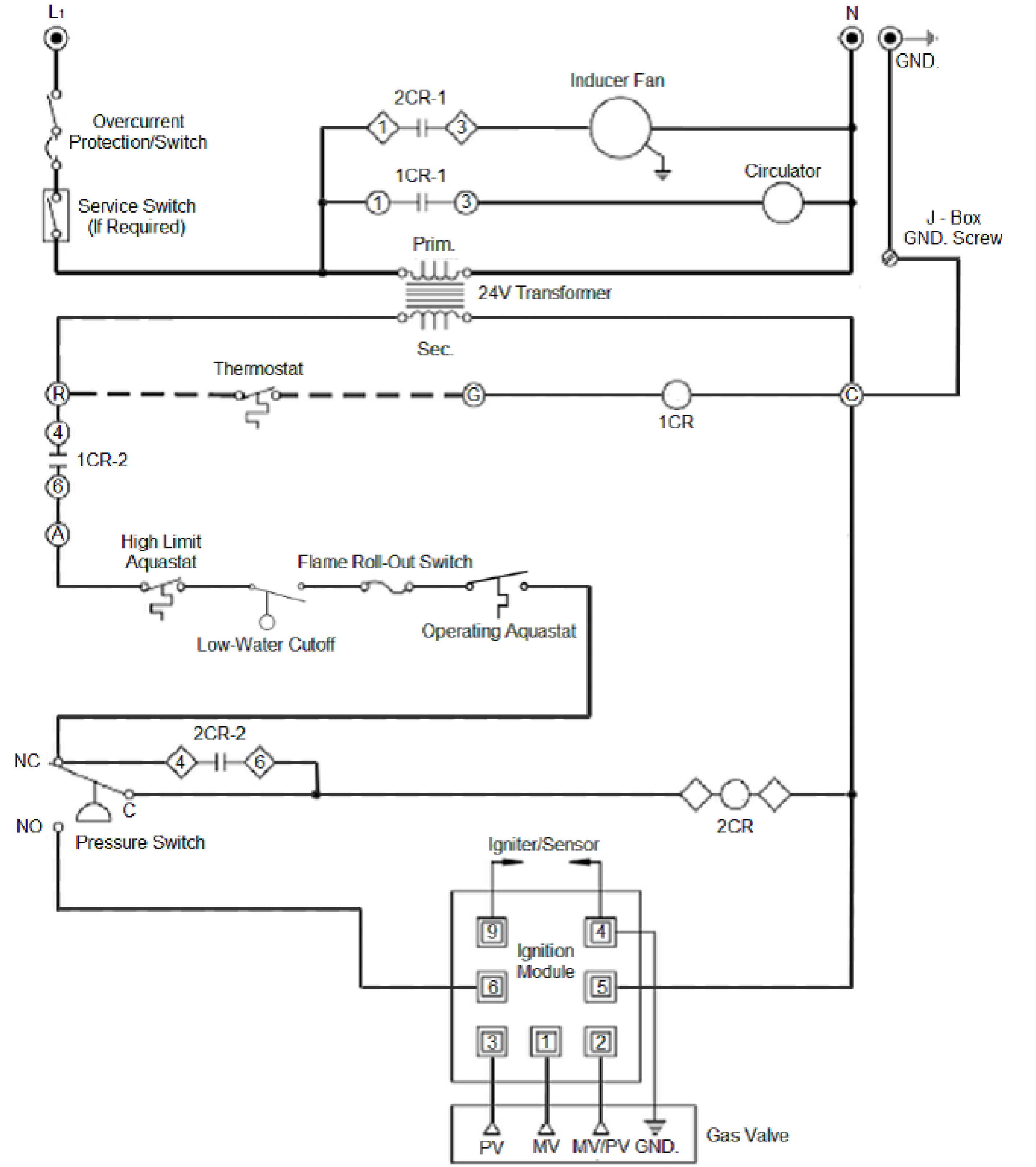
d.
24 volts AC during the ignition cycle only

Feedback

Your answer is incorrect.

The correct answer is: 120 volts AC during the ignition cycle only

Question text



Referring to the above drawing , which one of the following devices will energize the ignition module?

Select one:

a.

The combustion blower limit switch

b.
The thermostat pressure switch

c.
The low water cut-off switch

d.
The combustion blower pressure switch

Feedback

Your answer is incorrect.

The correct answer is: The combustion blower pressure switch

Question text

Referring to the drawing above which of the following sequences of operation will occur after the 2CR coil is energized ?

Select one:
a.
Inducer fan is energized which changes the position of the pressure switch

b.
Control board is energized which activates the inducer fan

c.
Pressure switch changes position which energizes the inducer fan

d.
Thermostat opens which ends heating cycle

Feedback

Your answer is incorrect.

The correct answer is: Inducer fan is energized which changes the position of the pressure switch

Question text

If the voltage is kept constant and the resistance is raised the amperage will :

Select one:
a.
Remain constant

b.
Fluctuate constantly

c.
Decrease

d.

Increase

Feedback

Your answer is incorrect.

The correct answer is: Decrease

Question text

One thousand millivolts equals which one of the following voltages ?

Select one:
a.
10 volts

b.
One volt

c.
1000 volts

d.
100 volts

Feedback

Your answer is incorrect.

The correct answer is: One volt

Question text

The term continuity testing means :

Select one:
a.
Testing cut-in and cut-out times for automatic controls

b.
Proving a continuous conducting path in an electrical circuit

c.
Checking operating of a warm air heating system for continuous comfort conditions

d.
Checking operating time of appliances

Feedback

Your answer is incorrect.

The correct answer is: Proving a continuous conducting path in an electrical circuit

Question text

The measurement of resistance to the flow of electricity is measured in

Select one:
a.
Watts

b.
Ohms

c.
Volts

d.
Amperes

Feedback

Your answer is incorrect.

The correct answer is: Ohms

Question text

Two common types of electrical current are :

Select one:
a.
Direct and single phase

b.
Alternating and poly phase

c.
Direct and alternating

d.
Single phase and poly phase

Feedback

Your answer is incorrect.

The correct answer is: Direct and alternating

Question text

Most control transformers used in heating and air conditioning appliances reduce the primary voltage supply to

Select one:
a.
12 volts

b.
6 volts

c.

3 volts

d.
24 volts

Feedback

Your answer is incorrect.

The correct answer is: 24 volts

Question text

A blown fuse may indicate that

Select one:
a.
There is a short in the wiring

b.
The neutral conductor is connected to the grounding conductor

c.
The wire is loose from a connection

d.
The conductors are larger than required

Feedback

Your answer is incorrect.

The correct answer is: There is a short in the wiring

Question text

An anticipator on a room thermostat is designed to :

Select one:
a.
Narrow the range of operating temperatures

b.
Compensate for variations in voltage

c.
Give more sensitive and even temperature control and narrow the differential

d.
Compensate for variations in room temperature

Feedback

Your answer is incorrect.

The correct answer is: Give more sensitive and even temperature control and narrow the differential

Question text

To determine the correct heat anticipator setting on a 24 volt thermostat one must

Select one:
a.
Multiply the voltage of the thermostat by the amperage

b.
Ask an electrician

c.
Determine the setting from the amperage rating indicated on the gas valve or control module or included in the certified manufacturer's installation instructions

d.
Find it by trail and error

Feedback

Your answer is incorrect.

The correct answer is: Determine the setting from the amperage rating indicated on the gas valve or control module or included in the certified manufacturer's installation instructions

Question text

Regulations require 2 pressure switches to be installed on steam boilers. One as an operating control and the other as a high pressure limit. These controls are wired in a :

Select one:
a.
Parallel control valve circuit in parallel with one another

b.
Parallel control valve circuit in series with one another

c.
Series control valve circuit in series with one another

d.
Series control valve circuit in parallel with one another

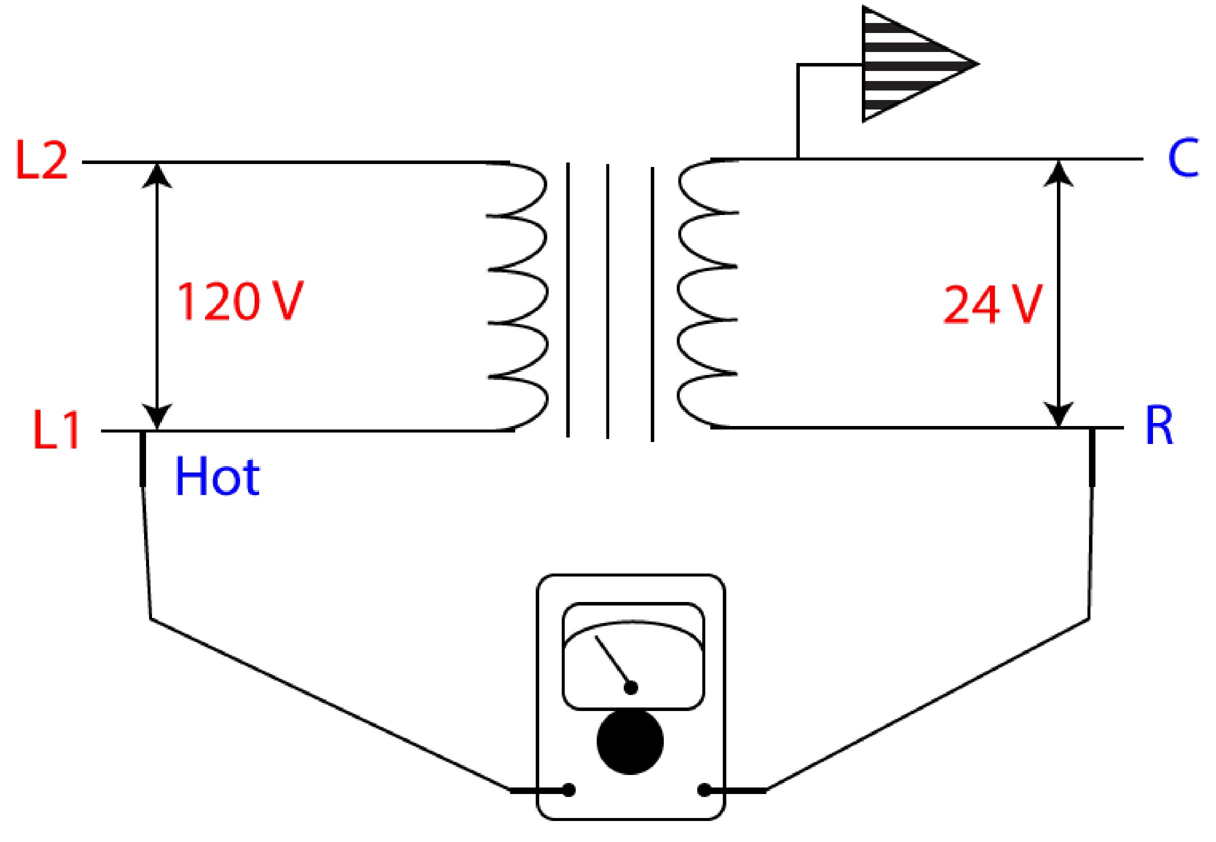
Feedback

Your answer is incorrect.

The correct answer is: Series control valve circuit in series with one another

Question text

Referring to the drawing below , if this transformer is in phase , the voltage readings across L1 and R will be



Select one:

a.
96 volts AC

b.
144 volts AC

c.
24 volts AC

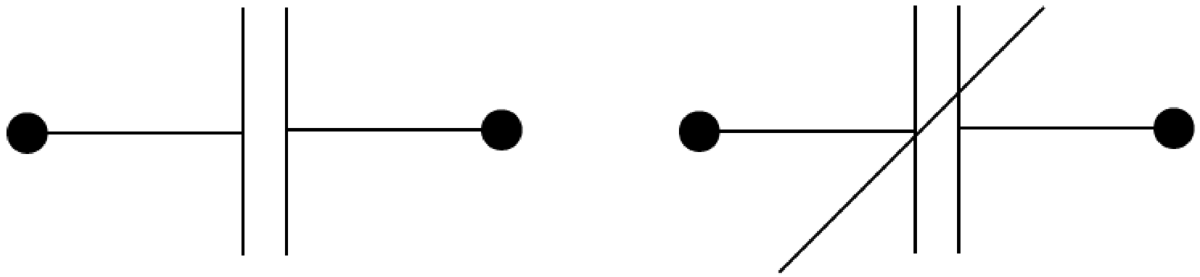
d.
120 volts AC

Feedback

Your answer is incorrect.

The correct answer is: 96 volts AC

Question text



Referring to the diagram above , this electrical symbol represents which one of the following electrical components ?

Select one:

a.
An adjustable pressure switch

b.
Electrical contacts

c.
A centrifugal switch

d.
A variable resistor

Feedback

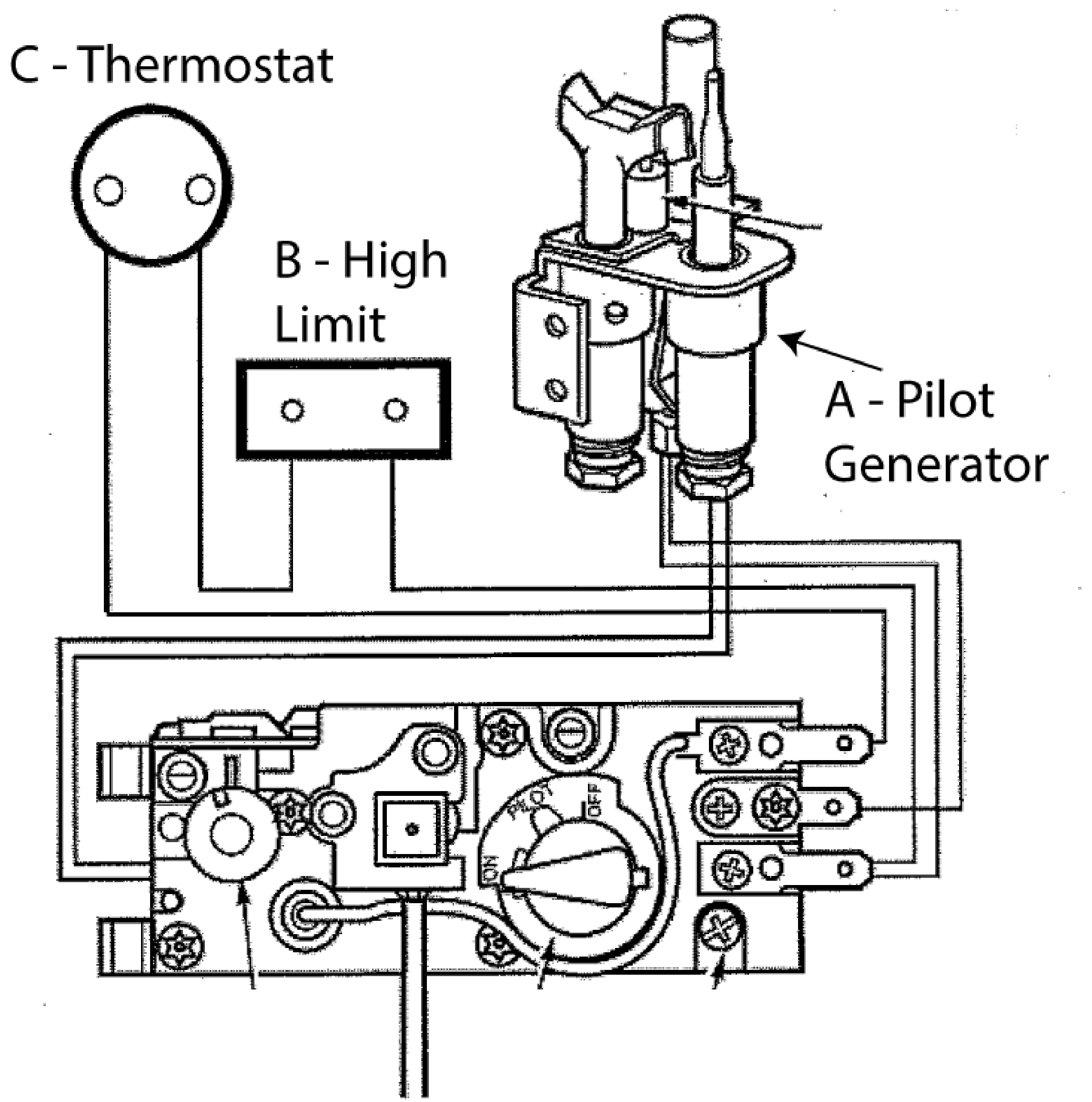
Your answer is incorrect.

The correct answer is: Electrical contacts

Question text

Use this link for the next 3 questions.

https://pvc.school/pluginfile.php/6664/question/questiontext/899455/228/14098/mara%20voltage%20readings.pdf



Determine the expected minimum voltage reading at point A

Select one:
a.
100 mV

b.
80 mV

c.
140 mV

d.
260 mV

Feedback

Your answer is incorrect.

The correct answer is: 260 mV

Question text

Determine the expected maximum voltage reading at Point B

Select one:
a.
10 mV

b.
5 mV

c.
110 mV

d.
2 mV

Feedback

Your answer is incorrect.

The correct answer is: 10 mV

Question text

Determine the expected maximum voltage reading at Point C. The device has a heat anticipator.

Select one:
a.
10 mV

b.
260 mV

c.
110 mV

d.
30 mV

Feedback

Your answer is incorrect.

The correct answer is: 110 mV

Question text

What is the expected closed circuit reading when testing a thermocouple ?

Select one:

a.
5 mV

b.
30 mV

c.
15 mV

d.
2 mV

Feedback

Your answer is incorrect.

The correct answer is: 15 mV

Question text

During a drop out test , the reading on the multi-meter drops to zero millivolts and the electromagnet has not released. What would be the problem ?

Select one:

a.
The safety shut off valve is using a 24 volt transformer

b.
The electromagnet has an alternate source of power and can not open

c.
Broken spring in the safety shut off valve

d.
There is no problem - this is acceptable

Feedback

Your answer is incorrect.

The correct answer is: Broken spring in the safety shut off valve

Question text

How much of the thermocouple is to be enveloped by the pilot flame ?

Select one:

a.
3/8 to 1/2 inch of the thermocouple cold junction

b.
1/2 to 3/4 inch of the thermocouple base

c.
As much of the thermocouple as possible

d.
3/8 to 1/2 inch of the thermocouple hot junction

Feedback

Your answer is incorrect.

The correct answer is: 3/8 to 1/2 inch of the thermocouple hot junction

Question text

What is the maximum flame failure response time for a thermocouple ?

Select one:

a.
90 seconds

b.
120 seconds

c.
30 seconds

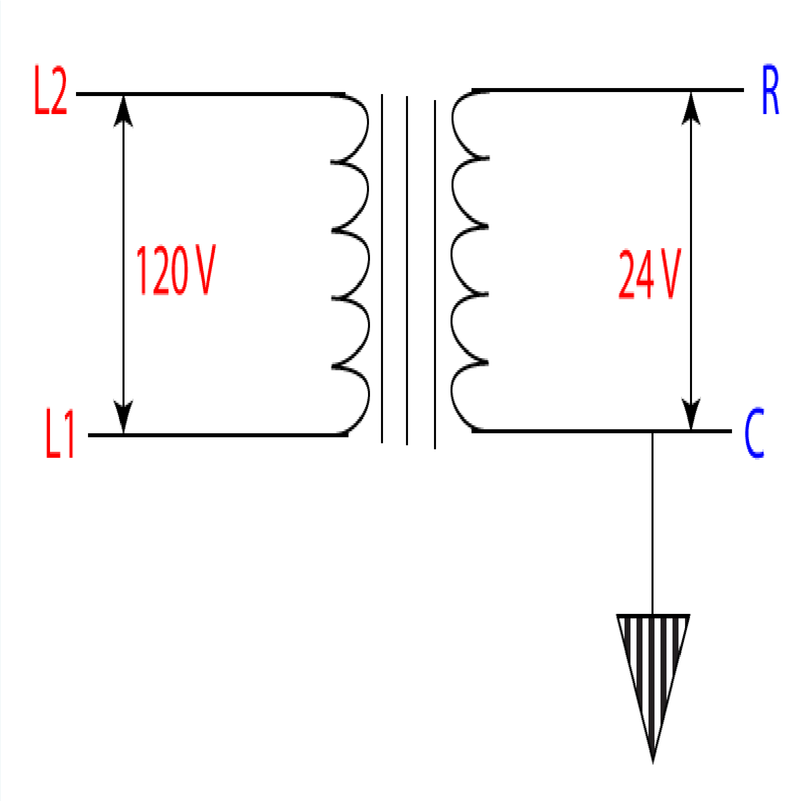
d.
60 seconds

Feedback

Your answer is incorrect.

The correct answer is: 90 seconds

Question text



What is the expected voltage reading from points L1 to C ?

Select one:

a.
144 V

b.
0 V

c.
96 V

d.
120 V

Feedback

Your answer is incorrect.

The correct answer is: 120 V

Question text

What if anything, is required to phase the transformer?

Select one:
a.
Reverse L1 and L2

b.
Either (a) or (b)

c.
Reverse R and C

d.
Nothing required , it is in phase

Feedback

Your answer is incorrect.

The correct answer is: Nothing required , it is in phase

Question text

Flame rods use the principle of

Select one:
a.
flame ionization and a rectified current

b.
All the options are correct

c.
UV radiation and an amplified current

d.
Quenching and an amplified current

Feedback

Your answer is incorrect.

The correct answer is: flame ionization and a rectified current

Question text

What is the most common flame safeguard found on residential appliances with electronic ignition systems ?

Select one:
a.
Ultraviolet detector

b.
Thermocouple

c.
Infrared detector

d.
Flame rod

Feedback

Your answer is incorrect.

The correct answer is: Flame rod

Question text

A flame rod requires a minimum effective grounding area of

Select one:
a.
15 **:** 1

b.
4 **:** 1

c.
20 **:** 1

d.
1 **:** 1

Feedback

Your answer is incorrect.

The correct answer is: 4 **:** 1

Question text

If the length of a conductor (wire) is increased the resistance will

Select one:

a.
Increase

b.
Remain constant

c.
Decrease

d.
Fluctuate constantly

Feedback

Your answer is incorrect.

The correct answer is: Increase

Question text

Automatic gas control circuits are never designed , rated or operated by

Select one:

a.
Millivoltage using thermopiles

b.
120 V

c.
Millivoltage using thermocouples

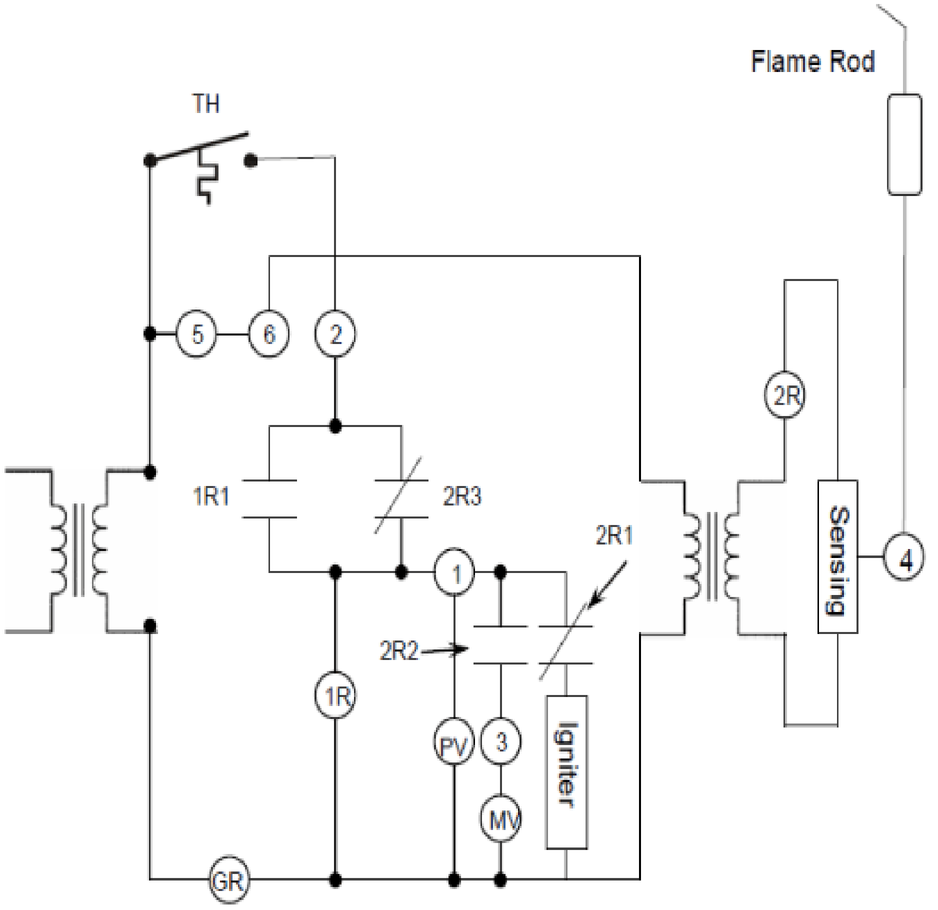
d.
24 V

Feedback

Your answer is incorrect.

The correct answer is: Millivoltage using thermocouples

Question text



Referring to the drawing illustrated above the sensing circuit is

Select one:

a.
Never monitored

b.
Occasionally monitored

c.
Continuously monitored

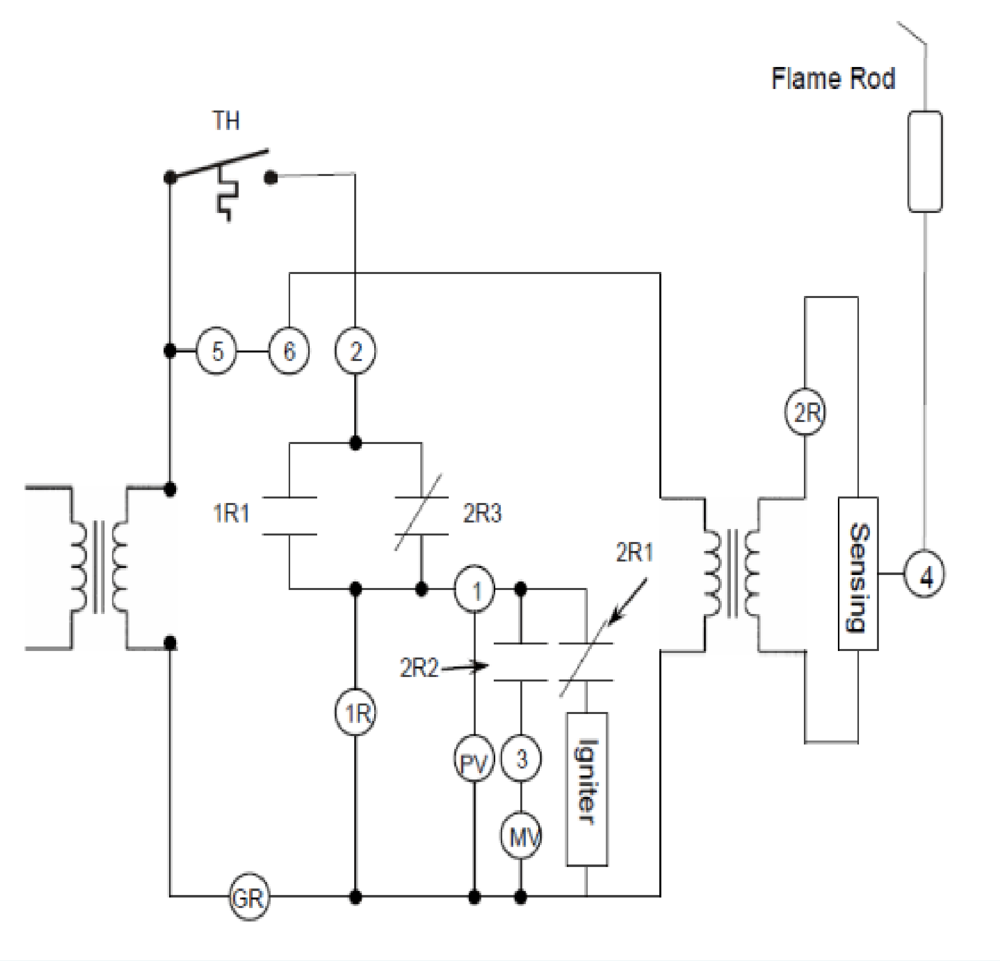
d.
Totally independent of the rest of the circuit

Feedback

Your answer is incorrect.

The correct answer is: Continuously monitored

Question text



Referring to the drawing illustrated above, the flame safeguard is a/an

Select one:

a.
Pilot generator

b.
Optical flame safeguard

c.
Flame rod

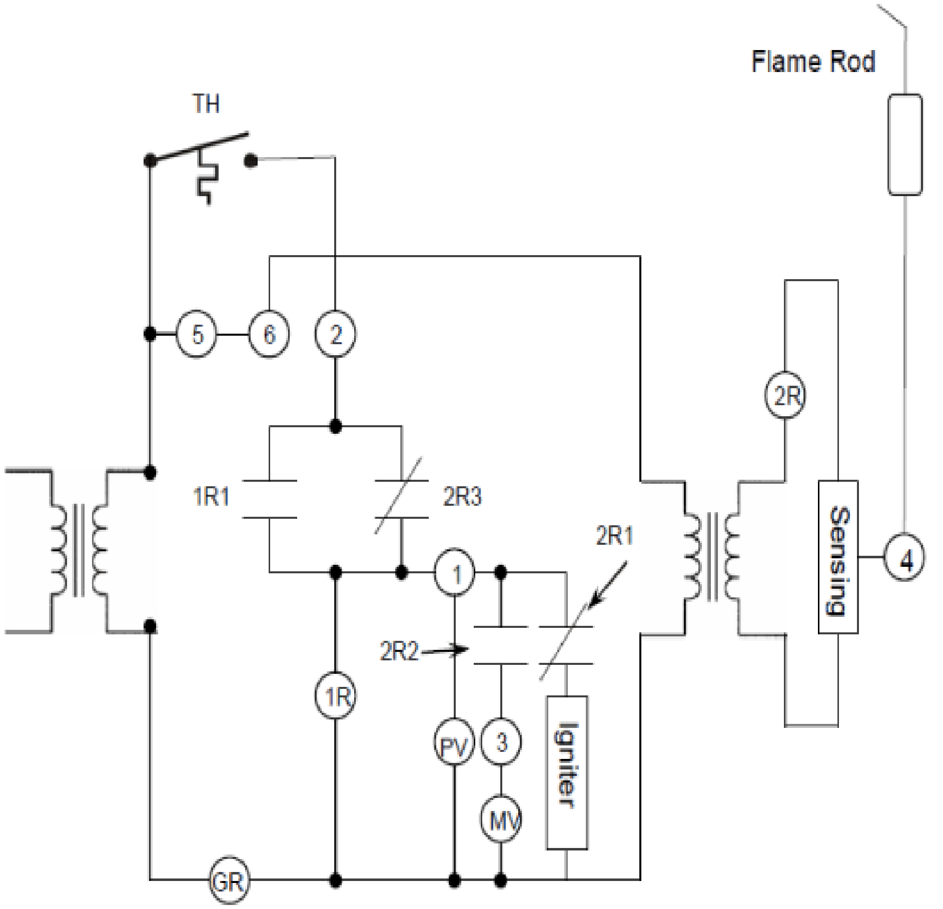
d.
Thermocouple and pilot assembly

Feedback

Your answer is incorrect.

The correct answer is: Flame rod

Question text



Referring to the drawing above the electrical circuits incorporate a/an

Select one:

a.
Expanding pilot

b.
Continuous pilot

c.
Interrupted pilot

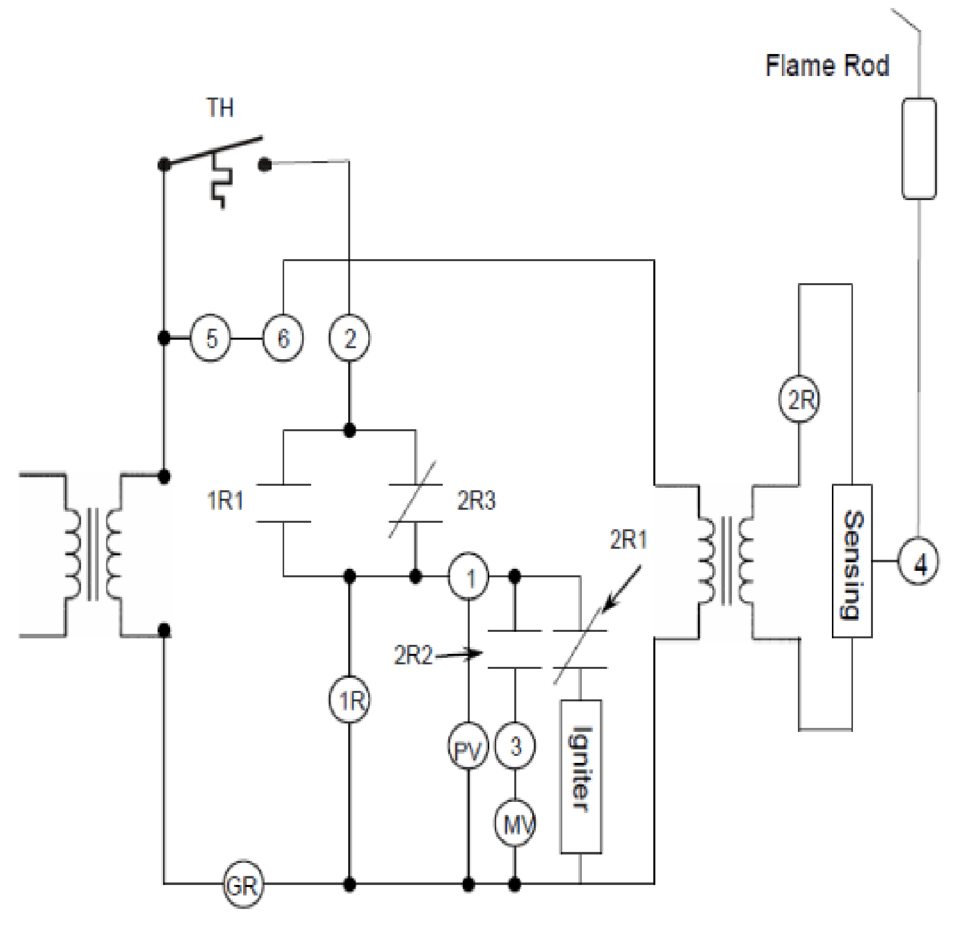
d.
Intermittent pilot

Feedback

Your answer is incorrect.

The correct answer is: Intermittent pilot

Question text



Referring to the drawing above, when relay coil 2R is energized. What happens next?

Select one:

a.
2R3 opens but power continues to flow to relay coil 1R through a closed 1R1

b.
2R1 opens and stops ignition

c.
2R2 closes and opens the main gas valve

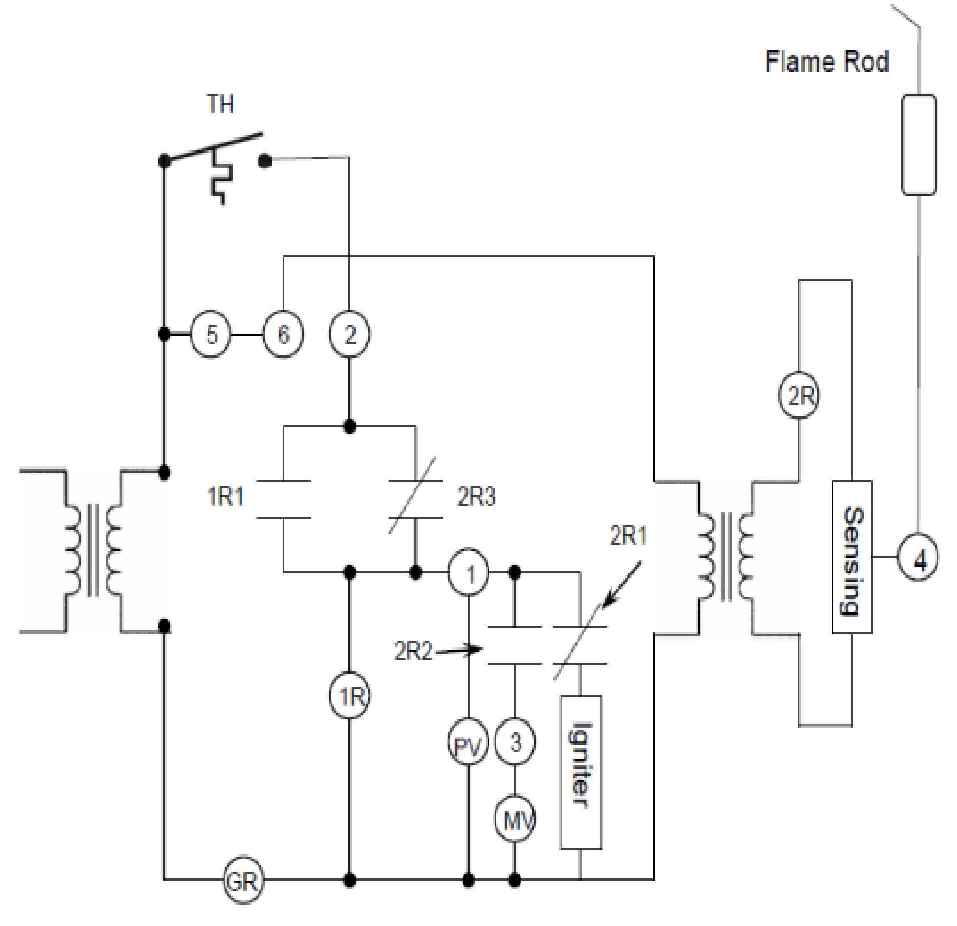
d.
All of the options are correct

Feedback

Your answer is incorrect.

The correct answer is: All of the options are correct

Question text



Referring to the drawing above , if the flame sensor detects the absence of the flame during the running cycle

Select one:

a.
All the options are correct

b.
The pilot valve will re-open for ignition

c.
The main gas valve will remain open during re-ignition

d.
Relays 2R1 , 2R2 and 2R3 will reverse position

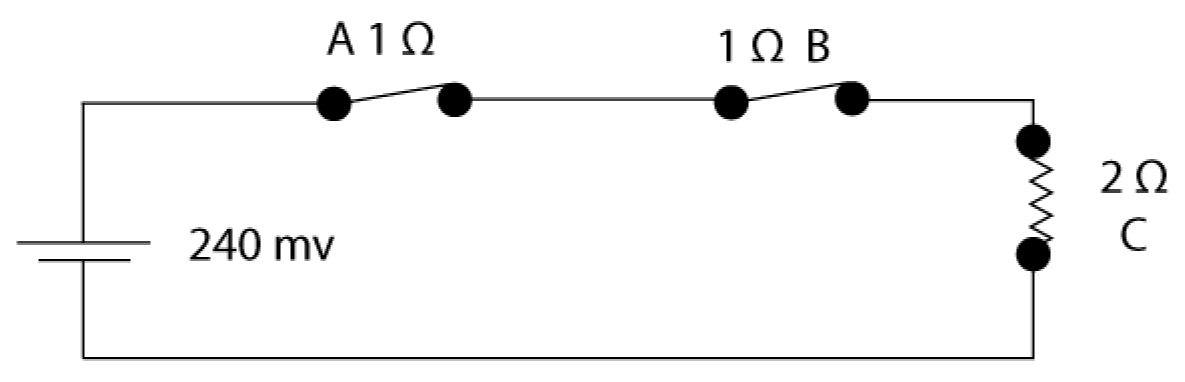
Feedback

Your answer is incorrect.

The correct answer is: Relays 2R1 , 2R2 and 2R3 will reverse position

Question text

Calculate the voltage drop across Point A in the drawing illustrated.



Select one:

a.
0 mv

b.
240 mv

c.
120 mv

d.
60 mv

Feedback

Your answer is incorrect.

The correct answer is: 60 mv

Question text

Which of the following is normally open ?

Select one:

a.
High limit switch

b.
Auto-fan switch

c.
A solenoid valve

d.
Flame roll-out switch

Feedback

Your answer is incorrect.

The correct answer is: Auto-fan switch

Question text

On a furnace the thermostat is wired in ____________ with the automatic gas valve.

Select one:
a.
Series / parallel

b.
Series

c.
Parallel

d.
Series & Parallel is acceptable

Feedback

Your answer is incorrect.

The correct answer is: Series

Question text

If the end switch on the automatic dampers of a D F M A unit failed to close what would happen next ?

Select one:
a.
Ignition sequence would initiate

b.
Blower motor would be powered

c.
Nothing would happen

d.
Main valve would open to low-fire

Feedback

Your answer is incorrect.

The correct answer is: Nothing would happen

Question text

Furnace fan control contacts open when circulating air

Select one:
a.
Cools down

b.
Warms up

c.
Stops flowing

d.
Starts flowing

Feedback

Your answer is incorrect.

The correct answer is: Cools down

Question text

To check the high limit on a furnace for proper operation a gas fitter could

Select one:
a.
Turn down the thermostat and call for heat

b.
Jump out the limit switch

c.
Turn down the operating limit and cycle on the furnace

d.
Disable the fan and call for heat

Feedback

Your answer is incorrect.

The correct answer is: Disable the fan and call for heat

Question text

When installing a new thermostat the gas fitter would check the

Select one:
a.
Voltage designation on the thermostat

b.
Amperage designation on the thermostat and match it to the rating of the gas valve

c.
All the options are correct

d.
Proper location of the thermostat to ensure that it is monitoring the ambient house temperature

Feedback

Your answer is incorrect.

The correct answer is: All the options are correct

Question text

The maximum temperature rating of a flame rod is

Select one:
a.
1000 ° F

b.
2600 °F

c.
470 ° F

d.
1200 ° F

Feedback

Your answer is incorrect.

The correct answer is: 2600 °F

Question text

When checking a circuit for continuity you would have your multi-meter set for

Select one:
a.
Volts

b.
Ohms

c.
Watts

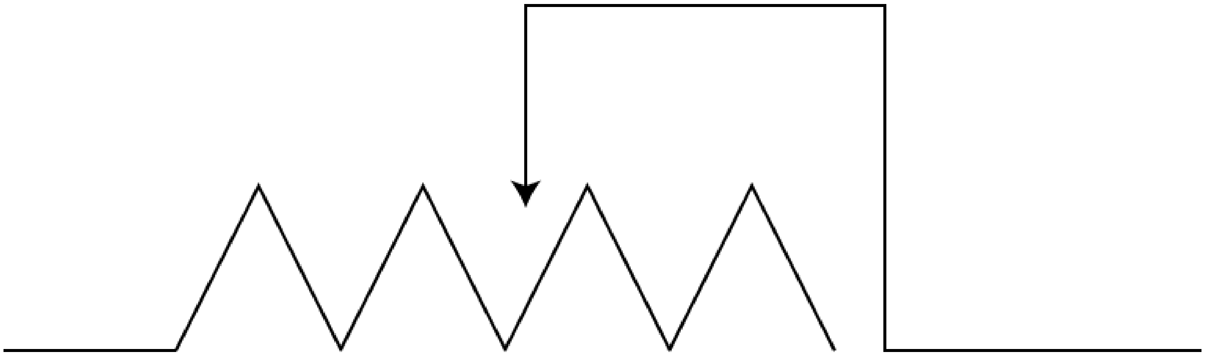
d.
Amps

Feedback

Your answer is incorrect.

The correct answer is: Ohms

Question text



Referring to the diagram above , this electrical symbol represents which one of the following electrical components?

Select one:
a.
An adjustable capacitor

b.
A junction plug

c.
A tapped transformer

d.
A variable resistor

Feedback

Your answer is incorrect.

The correct answer is: A variable resistor

Question text

The principle of adding cathodic protection to an underground piping system is to allow what to corrode ?

Select one:
a.
The electrolyte

b.
The anode

c.
All the options are correct

d.

The cathode

Feedback

Your answer is incorrect.

The correct answer is: The anode

Question text

What type of plastic pipe is allowed to be used for underground gas piping ?

Select one:
a.
CPVC

b.
ABS

c.
PVC

d.
PE

Feedback

Your answer is incorrect.

6.2.13 (CSA 137.4)

The correct answer is: PE

Question text

The diameter of a drip pocket serving a four inch NPS gas pipe shall be

Select one:
a.
Equal to the diameter of the pipe it serves but not greater than two inches NPS in diameter which ever is less

b.
Four inches NPS in diameter

c.
Three inches NPS in diameter

d.
Not more than three inches NPS in diameter

Feedback

Your answer is incorrect.

6.13.2 (b)

The correct answer is: Equal to the diameter of the pipe it serves but not greater than two inches NPS in diameter which ever is less

Question text

A propane fired system operating at 11 inches w.c (2.74 kPa) is limited to a maximum pressure drop of

Select one:
a.
10 % of the initial load

b.
0.5 inches w.c (125 Pa)

c.
1 inch w.c (250 Pa)

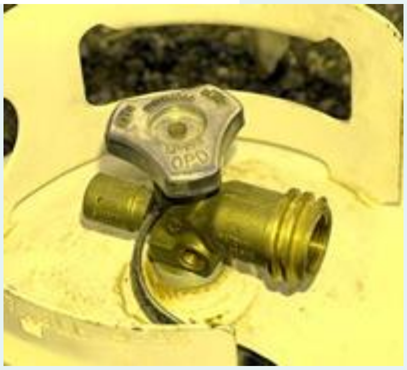
d.
5.5 inches w.c (1.368 kPa)

Feedback

Your answer is incorrect.

The correct answer is: 1 inch w.c (250 Pa)

Question text



The above drawing illustrated is of a propane

Select one:
a.
Evacuation valve for large tanks

b.
Liquid withdrawal valve for a forklift

c.
Valve with overfill protection device

d.

Cylinder liquid withdrawal valve

Feedback

Your answer is incorrect.

The correct answer is: Valve with overfill protection device

Question text

When a piping or tubing system is to be purged to the outdoors the purging lines shall not terminate closer than how many feet from an air intake ?

Select one:
a.
5 feet (1.5 m)

b.
3 feet (0.9 m)

c.
10 feet (3 m)

d.
25 feet (7.6 m)

Feedback

Your answer is incorrect.

6.23.7

The correct answer is: 10 feet (3 m)

Question text

The maximum allowable pressure drop (per B149.1 code) in a low pressure propane domestic piping system is

Select one:
a.
1 inch w.c (250 Pa)

b.
5 inches w.c (1.25 kPa)

c.
10 % of initial inlet pressure

d.
0.5 inches w.c (125 Pa)

Feedback

Your answer is incorrect.

The correct answer is: 1 inch w.c (250 Pa)

Question text

The unthreaded portion of a gas line shall extend at least how far, through a floor ?

Select one:
a.
One inch

b.
Two pipe diameters

c.
One pipe diameter

d.
Two inches

Feedback

Your answer is incorrect.

6.12.2

The correct answer is: Two inches

Question text

Copper tubing gas system in residential installations must be identified at what intervals ?

Select one:
a.
10 feet (3.0 m)

b.
6 feet (1.83 m)

c.
4 feet (1.22 m)

d.
20 feet (6.0 m)

Feedback

Your answer is incorrect.

6.17.3

The correct answer is: 6 feet (1.83 m)

Question text

A 150 foot (45.7 m) length of 2 inch NPS gas piping operating at a pressure of 2 PSIG (14 kPa) shall be tested at

Select one:
a.
15 PSIG (100 kPa) for 15 minutes

b.
15 PSIG (100 kPa) for 1 hour

c.
50 PSIG (340kPa) for 1 minutes

d.
50 PSIG (340kPa) for 15 minutes

Feedback

Your answer is incorrect.

Table 6.3

The correct answer is: 15 PSIG (100 kPa) for 15 minutes

Question text

Fittings and accessories placed on propane tanks must be rated for at least

Select one:
a.
250 PSIG or 400 WOG (1,725 kPa)

b.
400 PSIG or 125 WOG (2758 kPa)

c.
125 PSIG or 400 WOG (863 kPa)

d.
125 PSIG or 250 WOG (863 kPa)

Feedback

Your answer is incorrect.

The correct answer is: 250 PSIG or 400 WOG (1,725 kPa)

Question text

A corrugated metal connector may be used to connect a suspended appliance providing its length does not exceed

Select one:
a.
1 foot (0.3 m)

b.
6 feet (1.8 m)

c.
4 feet (1.2 m)

d.
2 feet (0.6 m)

Feedback

Your answer is incorrect.

6.21.3 (b)

The correct answer is: 2 feet (0.6 m)

Question text

Piping used to convey propane in the vapor phase may be schedule 40 with threaded joints if the vapor pressure does not exceed

Select one:
a.
125 PSIG (862 kPa)

b.
60 PSIG (413 kPa)

c.
11 inches w.c (2.74 kPa)

d.
5 PSIG (34 kPa)

Feedback

Your answer is incorrect.

6.2.3

The correct answer is: 125 PSIG (862 kPa)

Question text

In order to detect flaws or pinholes in the pipes exterior coating, what kind of test is performed ?

Select one:
a.
Visual

b.
Ultrasonic

c.
Hole

d.
Jeep

Feedback

Your answer is incorrect.

The correct answer is: Jeep

Question text

A corrugated metal connector used to connect a range shall not exceed

Select one:
a.
6 feet (1.8 m)

b.
2 feet (0.6 m)

c.
3 feet (0.9 m)

d.
4 feet (1.2 m)

Feedback

Your answer is incorrect.

6.21.3

The correct answer is: 6 feet (1.8 m)

Question text

When a gas line passes from one building to another building , it is necessary to have a gas valve at

Select one:
a.
The point of entry to the second building

b.
Both the exit from the first building and the entry of the second building

c.
The point of exit from the first building

d.
The point where the branch connects to the main line

Feedback

Your answer is incorrect.

6.18.8

The correct answer is: Both the exit from the first building and the entry of the second building

Question text

A metal used for a sacrificial anode is :

Select one:

a.
Steel

b.
Brass

c.
Magnesium

d.
Manganese

Feedback

Your answer is incorrect.

The correct answer is: Magnesium

Question text

The minimum diameter of steel pipe which must be welded is

Select one:

a.
2 inches NPS

b.
3 inches NPS

c.
2 1/2 inches NPS

d.
4 inches NPS

Feedback

Your answer is incorrect.

6.9.2

The correct answer is: 2 1/2 inches NPS

Question text

The difference in pressure from the inlet gas pressure and the outlet gas pressure of a piping system is known as

Select one:
a.
Static pressure

b.
Pressure drop

c.
Manifold pressure

d.
Friction loss

Feedback

Your answer is incorrect.

The correct answer is: Pressure drop

Question text

The maximum allowable pressure drop (according to the B149.1 code) on a gas piping system with an operating pressure of 7 to 14 inches w.c (1.75 - 3.5 kPa) shall not exceed

Select one:
a.
1/2 inches w.c (125 kPa)

b.
1 inch w.c (250 kPa)

c.
5 1/2 inches w.c (1.37 kPa)

d.
10% of initial inlet pressure

Feedback

Your answer is incorrect.

Table A.2

The correct answer is: 1 inch w.c (250 kPa)

Question text

The unthreaded portion of a gas line shall extend at least how far through a wall ?

Select one:
a.
One inch (25 mm)

b.
One pipe diameter

c.
Two inches (50 mm)

d.
Two pipe diameters

Feedback

Your answer is incorrect.

6.12.2

The correct answer is: One inch (25 mm)

Question text

In what direction does the current flow in a cathodically protected piping system ?

Select one:
a.
From the anode to the cathode and cathode to the anode because the system is producing AC current

b.
Neither the anode to the cathode and cathode to the anode because by adding cathodic protection , current flow is completely stopped

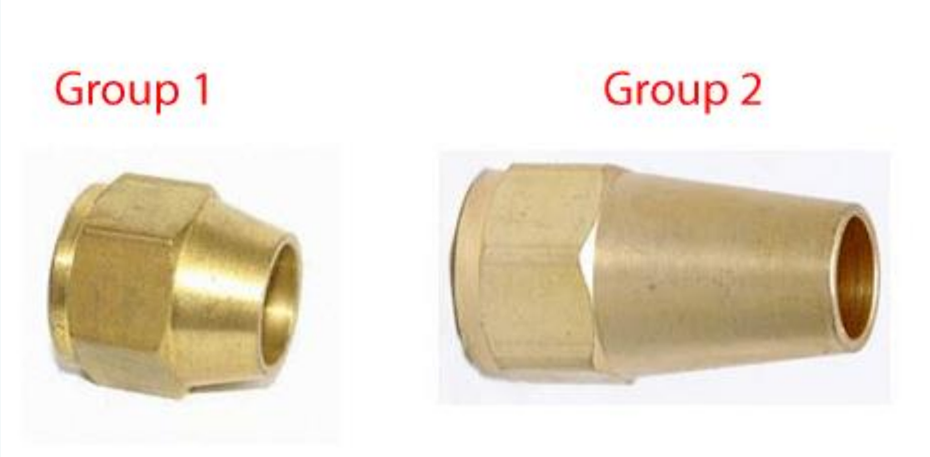
c.
From the cathode to the anode

d.
From the anode to the cathode

Feedback

Your answer is incorrect.

The correct answer is: From the anode to the cathode



When flared copper tubing is used in a piping system which of the above group of fittings should be used ?

Select one:
a.
Either Group 1 or 2 may be used if permitted by the inspector

b.
Group 2 may be used for low pressure systems only

c.
Group 2 may be used on propane systems only

d.
Group 1 should be used at all times

Feedback

Your answer is correct.

6.2.5

The correct answer is: Group 1 should be used at all times

Question text

A 1/2 inch NPS gas line must be supported at least every

Select one:
a.
5 feet (1.5 m)

b.
8 feet (2.4 m)

c.
6 feet (1.8 m)

d.
7 feet (2.1 m)

Feedback

Your answer is incorrect.

Table 6.2

The correct answer is: 6 feet (1.8 m)

Question text

The maximum length of a hose used to permanently connect an unvented appliance shall not exceed

Select one:

a.
6 feet (1.8 m)

b.
10 feet (3 m)

c.
20 feet (6 m)

d.
18 feet (5.5 m)

Feedback

Your answer is incorrect.

6.20.3

The correct answer is: 10 feet (3 m)

Question text

A construction heater may be connected to the gas supply with an approved hose providing its length does not exceed

Select one:
a.
10 feet (3 m)

b.
50 feet (15 m)

c.
15 feet (4.6 m)

d.
75 feet (30 m)

Feedback

Your answer is incorrect.

6.20.3 (c)

The correct answer is: 75 feet (30 m)

Question text

If the flow rate through a pipe is increased the pressure drop will

Select one:
a.
Be inversely proportional

b.

Remain constant

c.
Increase

d.
Decrease

Feedback

Your answer is incorrect.

The correct answer is: Increase

Question text

When underground piping is located under a commercial driveway , it must be buried to a minimum depth of :

Select one:
a.
24 inches

b.
12 inches

c.
15 inches

d.
18 inches

Feedback

Your answer is incorrect.

6.15.4

The correct answer is: 24 inches

Question text

If malleable iron bushings are to be used in a gas piping system they must

Select one:
a.
Be used when a change of only one pipe size is required

b.
Be of eccentric design

c.
Change at least two pipe sizes

d.

Be used only on the inlet of the pressure regulator

Feedback

Your answer is incorrect.

6.9.10

The correct answer is: Change at least two pipe sizes

Question text

What is the maximum horizontal spacing of support required for 3/4 inch O.D. copper tubing ?

Select one:
a.
10 feet (3 m)

b.
6 feet (2 m)

c.
15 feet (5 m)

d.
8 feet (2.5 m)

Feedback

Your answer is incorrect.

Table 6.2

The correct answer is: 6 feet (2 m)

Question text

Tubing used on 2 PSIG gas in a single family dwelling shall be identified by a band of yellow paint or tape at intervals not exceeding

Select one:
a.
3 feet

b.
10 feet

c.
6 feet

d.
20 feet

Feedback

Your answer is incorrect.

6.17.3

The correct answer is: 6 feet

Question text

When air , oxygen or the gases under pressure are used in connection with the gas supply _________ shall be provided as close as practicable to the point of interconnection

Select one:
a.
Plug valves

b.
Check valves

c.
A fire extinguisher

d.
Ball valves

Feedback

Your answer is incorrect.

6.8.5

The correct answer is: Check valves

Question text

Furnace fan control contacts open when circulating air

Select one:
a.
Warm up

b.
None of the options are correct

c.
Stops flowing

d.
Cools down

Feedback

Your answer is incorrect.

The correct answer is: Cools down

Question text

To decrease the input of a gas burner , you would

Select one:
a.
Turn down the adjusting screw of the regulator

b.
Reduce the primary air to the burner

c.
Reduce the manifold pressure

d.
Drill the existing orifice

Feedback

Your answer is correct.

The correct answer is: Reduce the manifold pressure

Question text

On a previously correctly operating furnace , short cycling starts on a high limit set at 200 ° F (93 ° C). The most likely cause would be

Select one:
a.
High limit set too low

b.
Undersized cold air return

c.
A short circuit in the high limit

d.
Dirty air filters

Feedback

Your answer is correct.

The correct answer is: Dirty air filters

Question text

A forced air furnace high limit control shuts off the

Select one:
a.
Electricity

b.
Blower

c.
Compressor

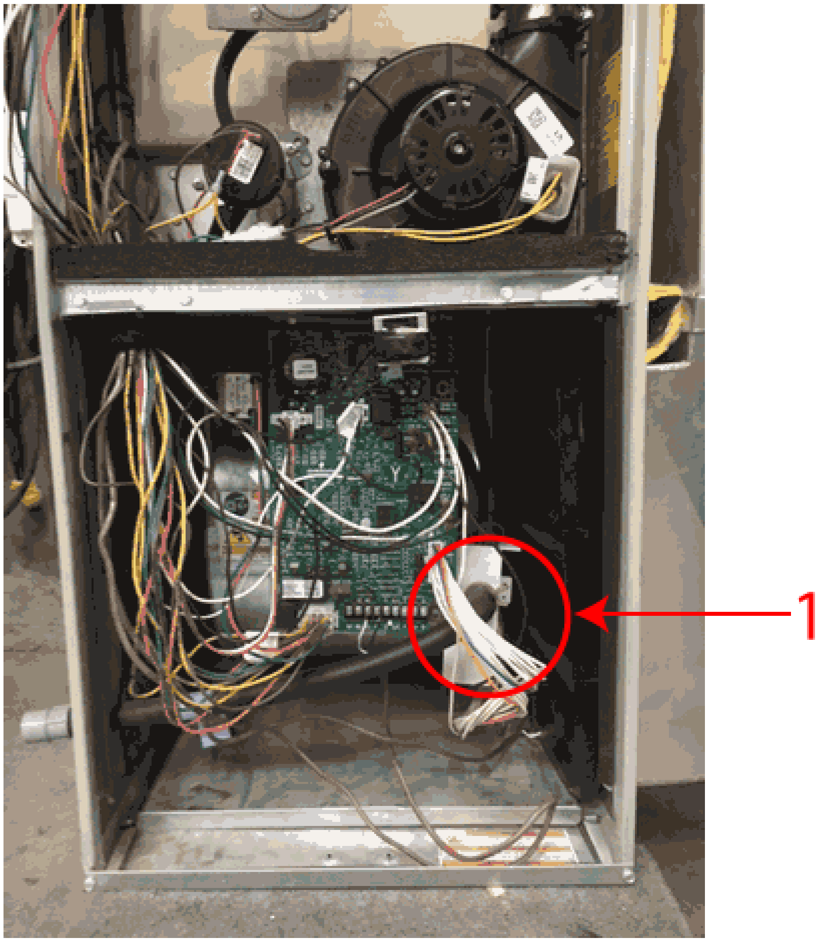
d.
Burner

Feedback

Your answer is correct.

The correct answer is: Burner

Question text



Referring to the above drawing , what is device 1 ?

Select one:
a.
Condensate trap

b.
Main power supply junction box

c.
Main blower fan motor

d.
Circulating air blower fan control box

Feedback

Your answer is correct.

The correct answer is: Condensate trap

Question text

Troubleshooting Hot Surface Ignition (H S I) systems includes which of the following ?

Select one:
a.
Measure current of igniter

b.
Setting the spark gap

c.
Adjusting the pilot flame

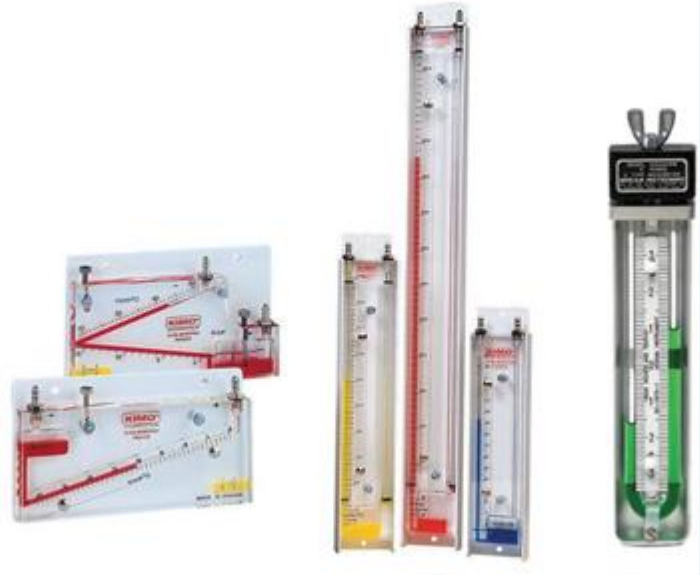
d.
Cleaning orifices

Feedback

Your answer is correct.

The correct answer is: Measure current of igniter

Question text



The diagram above shows what kind of instruments ?

Select one:
a.
Manometer indicating absolute pressures

b.
Velometer indicating a velocity in Ft./min

c.
Manometer indicating inches water column

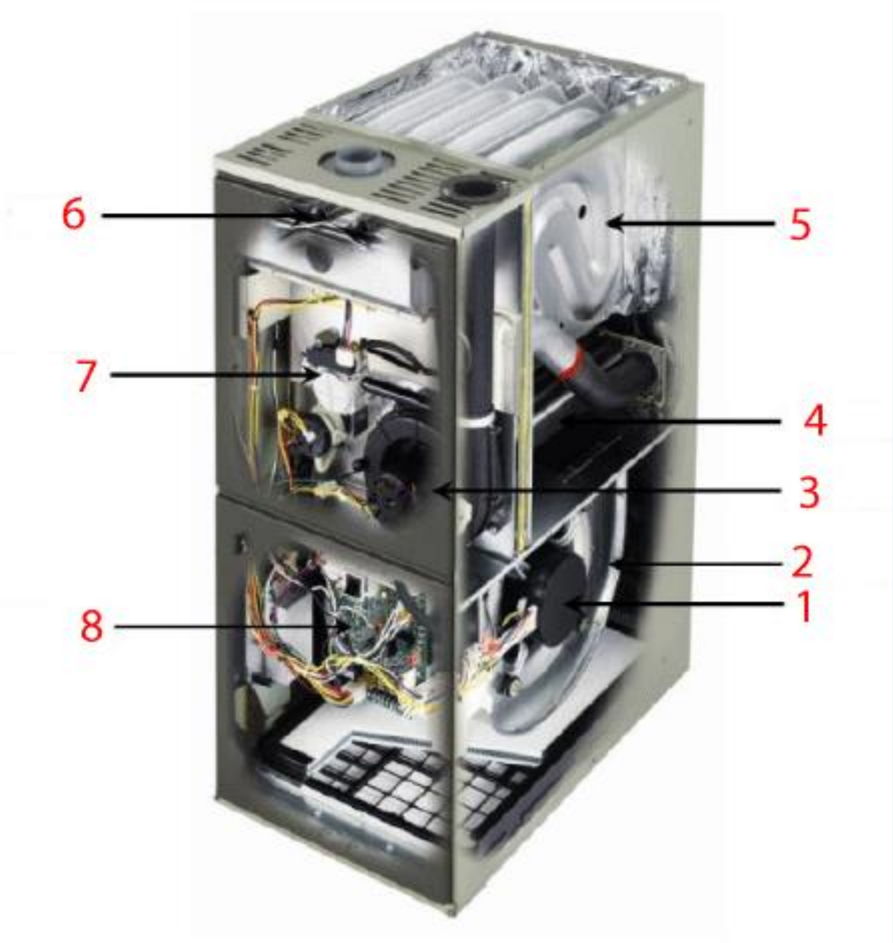
d.
Pressure differential gauge showing atmospheric pressure

Feedback

Your answer is correct.

The correct answer is: Manometer indicating inches water column

Question text



Referring to the drawing above , what is device 8 ?

Select one:
a.
Service power junction box

b.
Auxiliary fan control

c.
Integrated furnace control

d.
Main power supply for circulating air blower

Feedback

Your answer is incorrect.

The correct answer is: Integrated furnace control

Question text

Which of the following causes the burner to run continuously ? A short in the

Select one:
a.
Fan switch

b.
Thermostat wiring

c.
Stepdown transformer

d.
High limit

Feedback

Your answer is correct.

The correct answer is: Thermostat wiring

Question text

A flame that is waving or rolling out when the air circulation fan on a furnace comes on may indicate

Select one:
a.
All of the options are correct

b.
Too much primary air

c.

An over-pressurized manifold

d.
A cracked heat exchanger

Feedback

Your answer is correct.

The correct answer is: A cracked heat exchanger

Question text

To check if a high limit aquastat will shut down the gas to the main burner , the gas fitter should

Select one:
a.
Turn the burner on and set the high limit aquastat to its highest setting

b.
Make sure the circulating pump is running

c.
Turn the burner on and set the high limit aquastat to its lowest setting

d.
Turn the operating limit to its lowest setting

Feedback

Your answer is correct.

The correct answer is: Turn the burner on and set the high limit aquastat to its lowest setting

Question text

A customer complains that the furnace air circulating fan cycles ON and OFF frequently but the burner remains ON until the thermostat is satisfied. The fault is more than likely

Select one:
a.
Colder than normal weather

b.
Too high of a fan speed

c.
An incorrect heat anticipator setting

d.
Too low of a fan speed

Feedback

Your answer is correct.

The correct answer is: Too high of a fan speed

Question text

The normal set point of a domestic hot water tank thermostat would be

Select one:

a.
160 ° F (71 ° C)

b.
120 ° F (49 ° C)

c.
100 ° F (38 ° C)

d.
140 ° F (60 ° C)

Feedback

Your answer is incorrect.

The correct answer is: 140 ° F (60 ° C)

Question text

During the heating cycle of a forced air furnace the burner cycles ON and OFF but the fan runs continuously. This could be caused by

Select one:

a.
An incorrectly adjusted heat anticipator

b.
An dirty air filter

c.
A fan speed that is set too low

d.
All the options are correct

Feedback

Your answer is correct.

The correct answer is: All the options are correct

Question text

An operating standing pilot type forced air furnace has a 24 volt control system. While checking out the control circuit, a jumper was placed across the gas valve coil. Which one of the following conditions will result ?

Select one:

a.
The gas valve coil will burn out

b.
The secondary side of the transformer will burn out

c.
The thermostat heat anticipator will burn out

d.
The gas valve will not close

Feedback

Your answer is incorrect.

The correct answer is: The thermostat heat anticipator will burn out

Question text

When using non-metallic sheathed cable it shall be secured by straps or other approved devices at maximum intervals of

Select one:
a.
1 m (3 feet)

b.
1.5 m (5 feet)

c.
2 m (6 feet)

d.
1.2 m (3.3 feet)

Feedback

Your answer is correct.

E.code - 12.510

The correct answer is: 1.5 m (5 feet)

Question text

Overload protection for a manually started motor is required for motor larger than

Select one:
a.
1 HP

b.
3/4 HP

c.
1/3 HP

d.
1/2 HP

Feedback

Your answer is correct.

E.code - 28.308

The correct answer is: 1 HP

Identify the incorrect answer after the following statement

A qualified person who has an electrical endorsement (EE) to their gas fitter's license may

Select one:
a.
Remove and replace with new an existing gas appliance where the full load currents of the two units are identical

b.
Install 120 volt wiring circuit from the appliance in to the panel board

c.
Remove and replace with new an identical integral replacement part of the electrical control of a gas appliance

d.
Install Class 2 low voltage thermostat control wiring

Feedback

Your answer is correct.

The correct answer is: Install 120 volt wiring circuit from the appliance in to the panel board

Question text

An inspection request must be made upon completion of each phase of the electrical work

Select one:
True
False

Feedback

The correct answer is 'True'.

Question text

You may connect the furnace circuit if which one of the following labels is present on the furnace:

Select one:
a.
BC hydro

b.
NFPA

c.
Ontario hydro

d.
CSA

Feedback

Your answer is correct.

The correct answer is: CSA

Question text

Non-metallic sheathed cable used in exposed wires shall be adequately protected against damage below

Select one:
a.
1 meter (3 feet)

b.
1.5 meters (6 feet)

c.
2 meters (6 feet)

d.
2.5 meters (8 feet)

Feedback

Your answer is incorrect.

E.code 12 - 518

The correct answer is: 1.5 meters (6 feet)

Question text

In a situation where an electrical contractor has determined an electrical permit is required and where it is not an emergency situation , it is acceptable to start the job first and apply for an electrical permit later

Select one:
True

False

Feedback

E.Code - 2 - 004

The correct answer is 'False'.

Question text

The table used to determine the maximum over current protection for a motor circuit is

Select one:
a.
T2

b.
T45

c.
T13

d.
T29

Feedback

Your answer is incorrect.

The correct answer is: T29

Question text

What is the minimum size copper conductor required to feed a 3/4 HP , 115 volt single phase AC motor in a 25 ° C (77 ° F) ambient temperature ?

Select one:
a.
12 AWG , RW60

b.
14 AWG , TW60

c.
12 AWG , TW75

d.
14 AWG , TW75

Feedback

Your answer is incorrect.

The correct answer is: 14 AWG , TW75

Question text

The ampacity of a copper 14 AWG NMD-90 cable is ?

Select one:
a.
20 amps

b.
10 amps

c.
12 amps

d.
25 amps

Feedback

Your answer is incorrect.

Table 2

The correct answer is: 25 amps

Question text

Identify the ***incorrect*** answer after the following statement

An insulated 12 AWG copper neutral conductor shall

Select one:
a.
Be identified by grey covering

b.
Be identified by green covering
c.
Be identified by a white covering

d.
Be identified dark white

Feedback

Your answer is incorrect.

4.032 (3)

The correct answer is: Be identified by green covering

Question text

The electric circuit for a forced air furnace in a single family dwelling shall be obtained from single branch circuit used for no other purposes.

Select one:

True
False

Feedback

26 - 808

The correct answer is 'True'.

Question text

It is permissible to use a flexible cord plugged into a receptacle to supply power to a permanently installed furnace.

Select one:
True
False

Feedback

4 - 010 (3)

The correct answer is 'False'.

Question text

Which of the following materials shall NOT be used as an anchor into masonry or concrete for the support of any electrical equipment ?

Select one:
a.
Lead alloy

b.
Lead

c.
Wood

d.
Plastic

Feedback

Your answer is correct.

2 - 110

The correct answer is: Wood

Question text

The nominal supply voltage of a safety control circuit for gas or oil fuel burning equipment shall not exceed

Select one:
a.

240 volts

b.
12 volts

c.
30 volts

d.
120 volts

Feedback

Your answer is correct.

The correct answer is: 120 volts

Question text

A motor disconnecting means for a gas appliance in a single family dwelling , shall be within sight of and within a maximum of how many meters of the motor ?

Select one:
a.
6 m (20 feet)

b.
10 m (33 feet)

c.
9 m (30 feet)

d.
3 m (10 feet)

Feedback

Your answer is incorrect.

28.604 (3)

The correct answer is: 9 m (30 feet)

Question text

Where armoured cables are bent during installation the radius of the curve of the inner edge of the bends shall be at least how many times the external diameter of the armoured cable ?

Select one:
a.
3 times

b.
12 times

c.
10 times

d.
6 times

Feedback

Your answer is correct.

12.614 (1)

The correct answer is: 6 times

Question text

When relocating a furnace it is acceptable to extend the branch circuit wiring by using CSA approved marrette connectors without a junction box

Select one:
True
False

Feedback

The correct answer is 'False'.

When non-metallic sheathed cable is run in proximity to heating ducts an acceptable thermal barrier should be installed between the cable and the duct or an air space should be allowed for

Select one:
a.
100 mm (4 inches)

b.
50 mm (2 inches)

c.
25 mm (1 inch)

d.
12 mm (1/2 inch)

Feedback

Your answer is incorrect.

12 - 506

The correct answer is: 25 mm (1 inch)

Question text

What is the maximum allowable voltage drop on a feeder or branch circuit ?

Select one:
a.
3 %

b.
5 %

c.
6 %

d.
5 volts

Feedback

Your answer is correct.

8 - 102

The correct answer is: 3 %

Question text

A 3/4 hp 115 volt single phase motor is fed from a circuit breaker panel. What is the maximum calculated rating of the over current device protecting this circuit ?

Select one:
a.
17.25 amps

b.
35 amps

c.
13.8 amps

d.
15.18 amps

Feedback

Your answer is incorrect.

The correct answer is: 35 amps

Question text

A motor starter is not required if the furnace motor is 1/6 HP

Select one:
True
False

Feedback

The correct answer is 'True'.

Question text

Which of the following is not permitted as a disconnecting means ?

Select one:
a.
Disconnect switch

b.
Single pole switch

c.
Circuit breaker

d.
Three way switch

Feedback

Your answer is incorrect.

2 - 304 (2)

The correct answer is: Three way switch

Question text

What is the minimum clearance between a receptacle and a gas service regulator vent outlet ?

Select one:
a.
300 mm

b.
1.5 m

c.
900 mm

d.
1000 mm

Feedback

Your answer is incorrect.

Annex B 2-326

The correct answer is: 1000 mm

Question text

What do the code letters TE refer to when found marked on motors for use in non-hazardous locations ?

Select one:
a.
Totally enclosed

b.
Tungsten Enamelled

c.
Tasmanian Electric

d.
Torque Engineered

Feedback

Your answer is correct.

2 - 404 (c)

The correct answer is: Totally enclosed

Question text

What is the ampacity of No.12 AWG NMD 90 copper conductors ?

Select one:
a.
20 amps

b.
15 amps

c.
40 amps

d.
30 amps

Feedback

Your answer is incorrect.

Table 2

The correct answer is: 30 amps

Question text

What is the ampacity of type SO flexible cord with two 14 AWG conductors ?

Select one:
a.
10 amps

b.

18 amps

c.
20 amps

d.
15 amps

Feedback

Your answer is correct.

Table 12

The correct answer is: 18 amps

Question text

What colour must be used for a neutral conductor ?

Select one:
a.
Black

b.
Green

c.
White

d.
Red

Feedback

Your answer is incorrect.

4 - 028 (1)

The correct answer is: White

Question text

What is the minimum size copper conductor is required to feed 120 volt , 10 amp furnace circuit if the conduit between the panel and the junction box near the furnace carries 7-TW60 power conductors ?

Select one:
a.
No 10

b.
No 12

c.

No 14

d.
No 8

Feedback

Your answer is incorrect.

table 2 & 5c

The correct answer is: No 14

Question text

What is the de-ration factor if there are 5 current carrying power conductors in a raceway ?

Select one:
a.
60 %

b.
80 %

c.
70 %

d.
100 %

Feedback

Your answer is correct.

table 5C

The correct answer is: 80 %

Question text

A class II circuit shall have its output limited to :

Select one:
a.
24 V amperes

b.
1000 V amperes

c.
50 V amperes

d.
100 V amperes

Feedback

Your answer is correct.

16 - 200

The correct answer is: 100 V amperes

Question text

A 30 amp over current device protecting a circuit will require what size of copper bonding conductor ?

Select one:
a.
12 AWG

b.
10 AWG

c.
14 AWG

d.
16 AWG

Feedback

Your answer is correct.

Table 16

The correct answer is: 12 AWG

Question text

Where conductors extend from armour cable they shall be protected by a/an

Select one:
a.
Connector

b.
Fitting

c.
Clamp

d.
Insulated bushing

Feedback

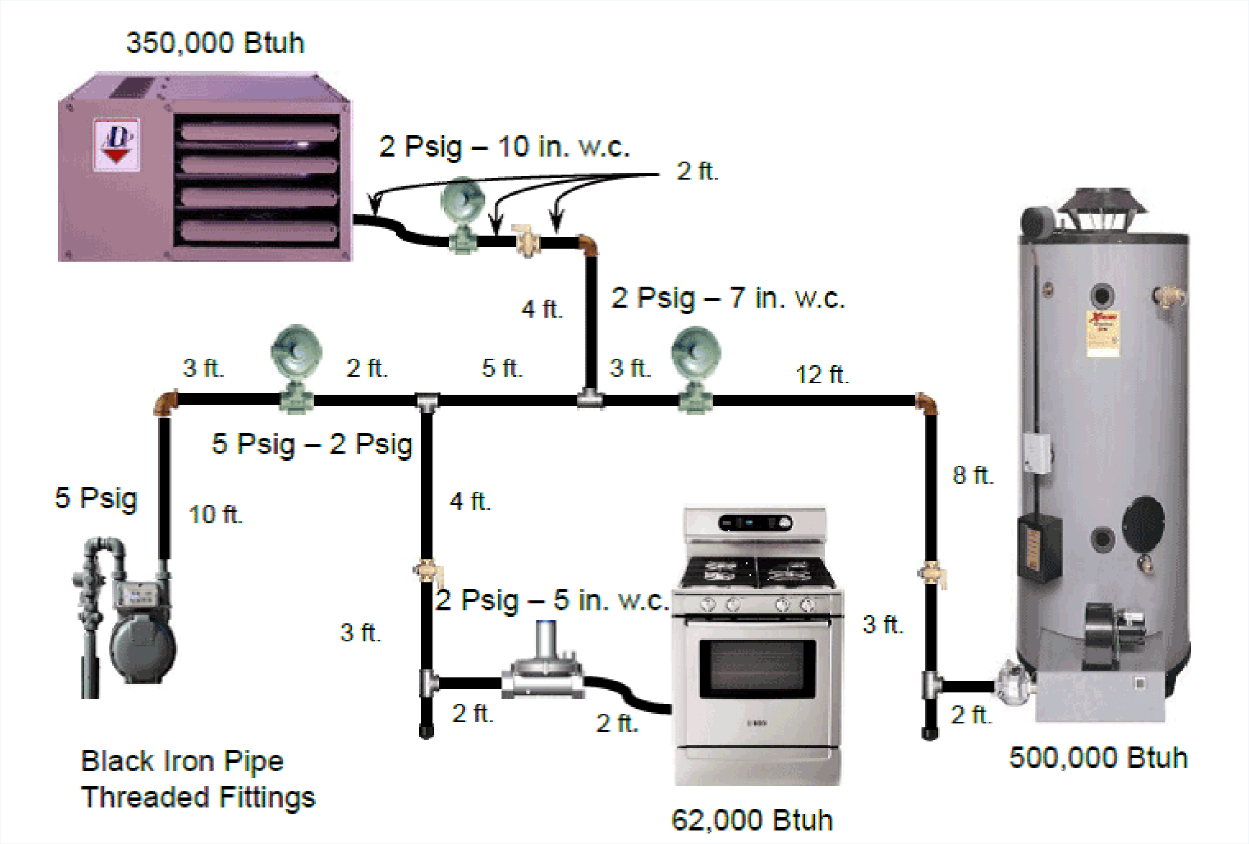
Your answer is correct.

12 - 610 (1)

The correct answer is: Insulated bushing

Question text

In the illustration below , which of the following lengths would be the result of a calculation of the 5 pound system ?



Select one:

a.
13 feet

b.
13.62 feet

c.
14.55 feet

d.
15 feet

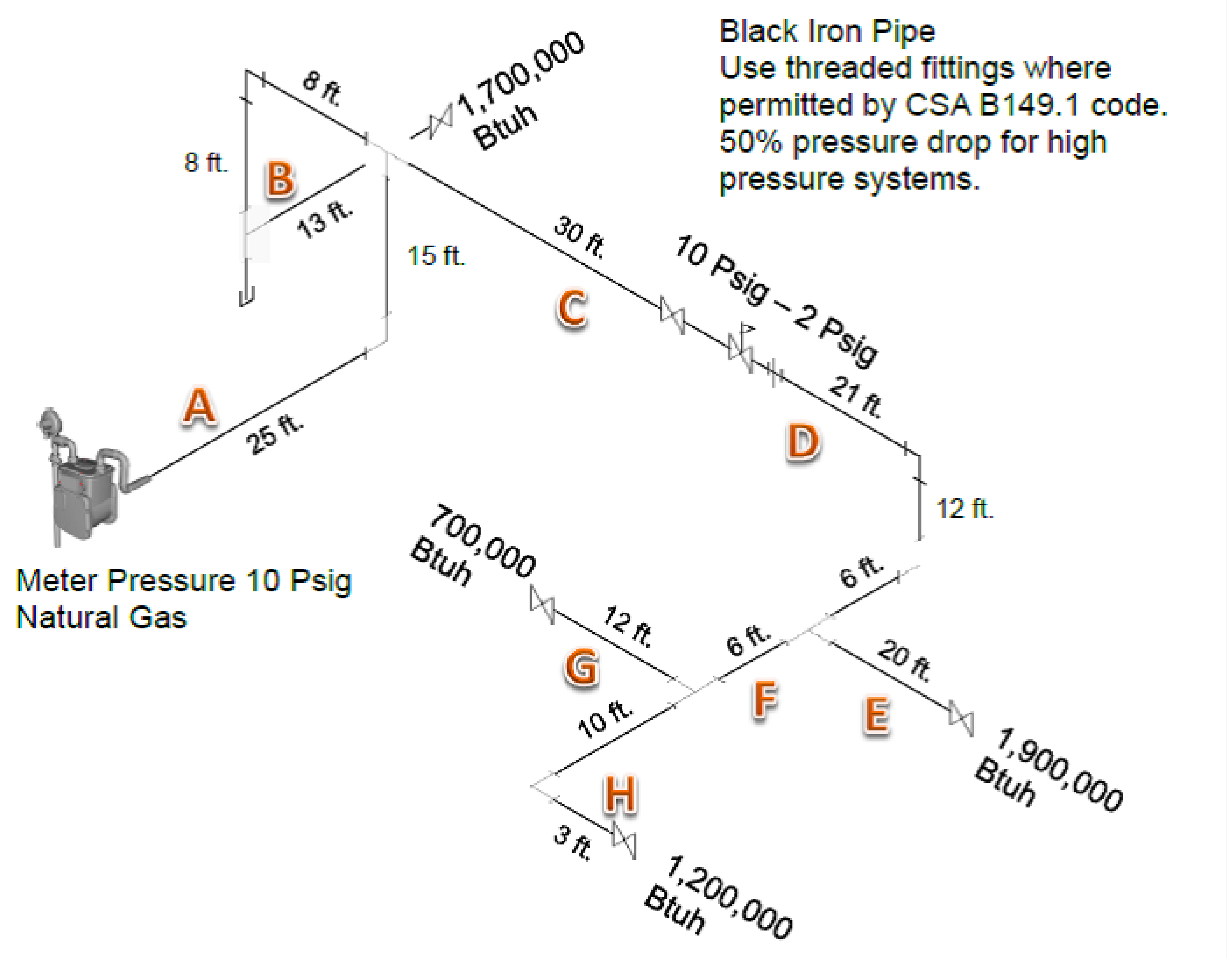
Feedback

Your answer is incorrect.

The correct answer is: 14.55 feet

Question text

In the diagram below , which length would be used to calculate the run to the appliance with a Btuh load of 1200MBH ?,



Black Iron Pipe
Use threaded fittings where permitted by CSA B149.1 code.
50% pressure drop for high pressure systems.

Meter Pressure 10 Psig
Natural Gas

Select one:

a.
58 feet

b.
128 feet

c.
59 feet

d.
57 feet

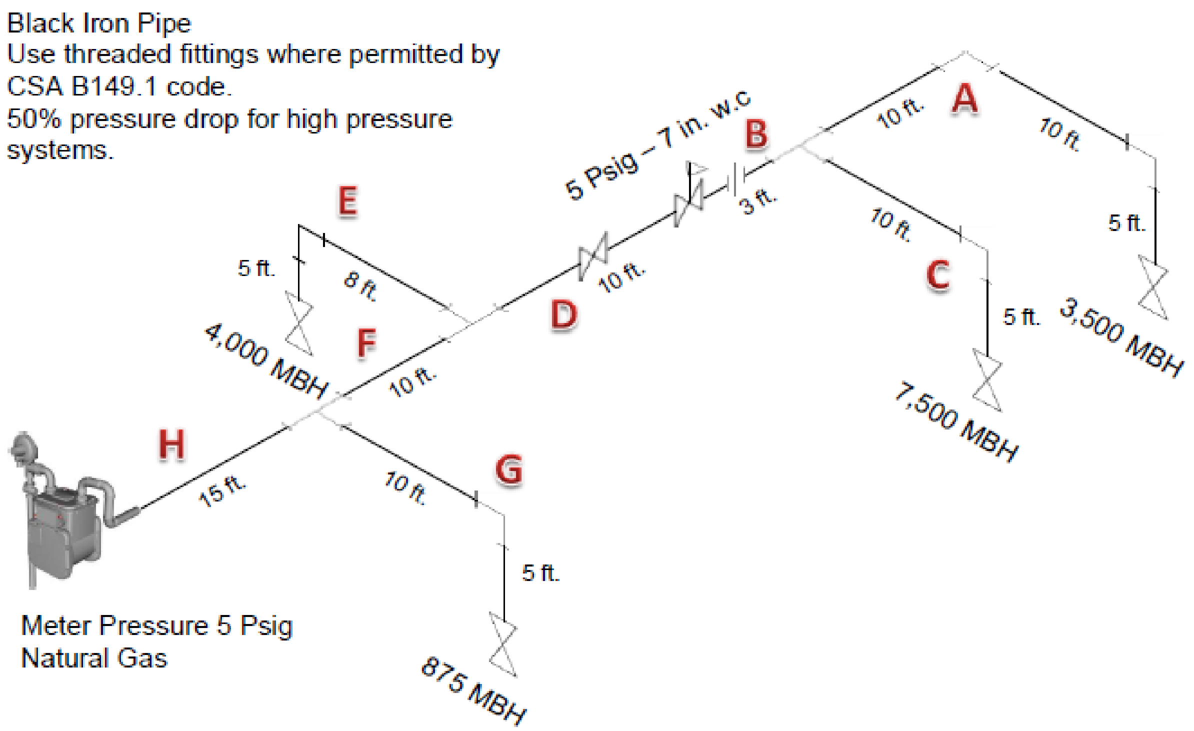
Feedback

Your answer is incorrect.

The correct answer is: 59 feet

Question text

In the illustration below, what is the diameter of pipe A
?



Black Iron Pipe
Use threaded fittings where permitted by CSA B149.1 code.
50% pressure drop for high pressure systems.

Meter Pressure 5 Psig
Natural Gas

Select one:

a.
2 1/2 inch welded

b.
2 1/2 inch threaded

c.
3 inch threaded

d.
3 inch welded

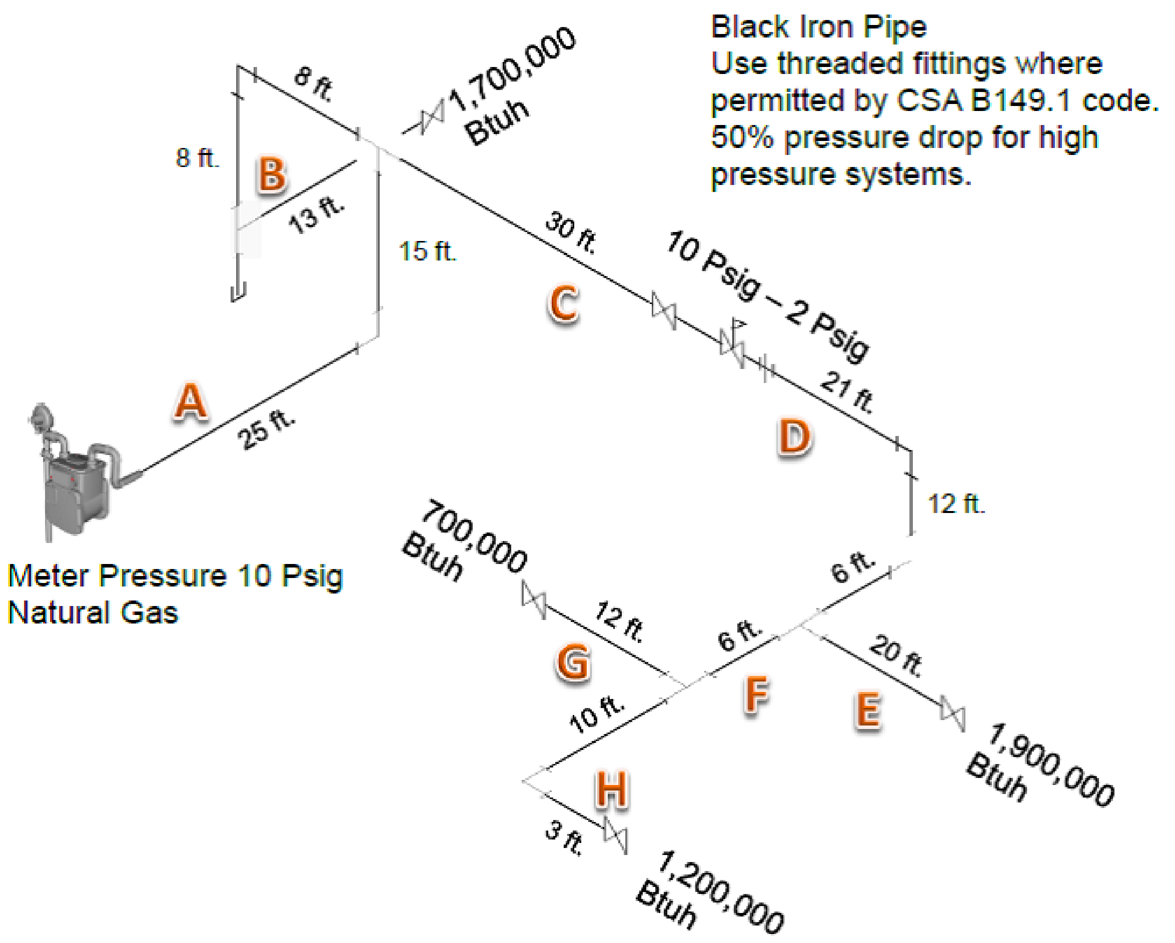
Feedback

Your answer is incorrect.

The correct answer is: 2 1/2 inch welded

Question text

In the illustration below, calculate the LER for the 10 PSIG system?



Black Iron Pipe
Use threaded fittings where permitted by CSA B149.1 code.
50% pressure drop for high pressure systems.

Meter Pressure 10 Psig
Natural Gas

Select one:

a.
97.94 feet

b.
68.42 feet

c.
70 feet

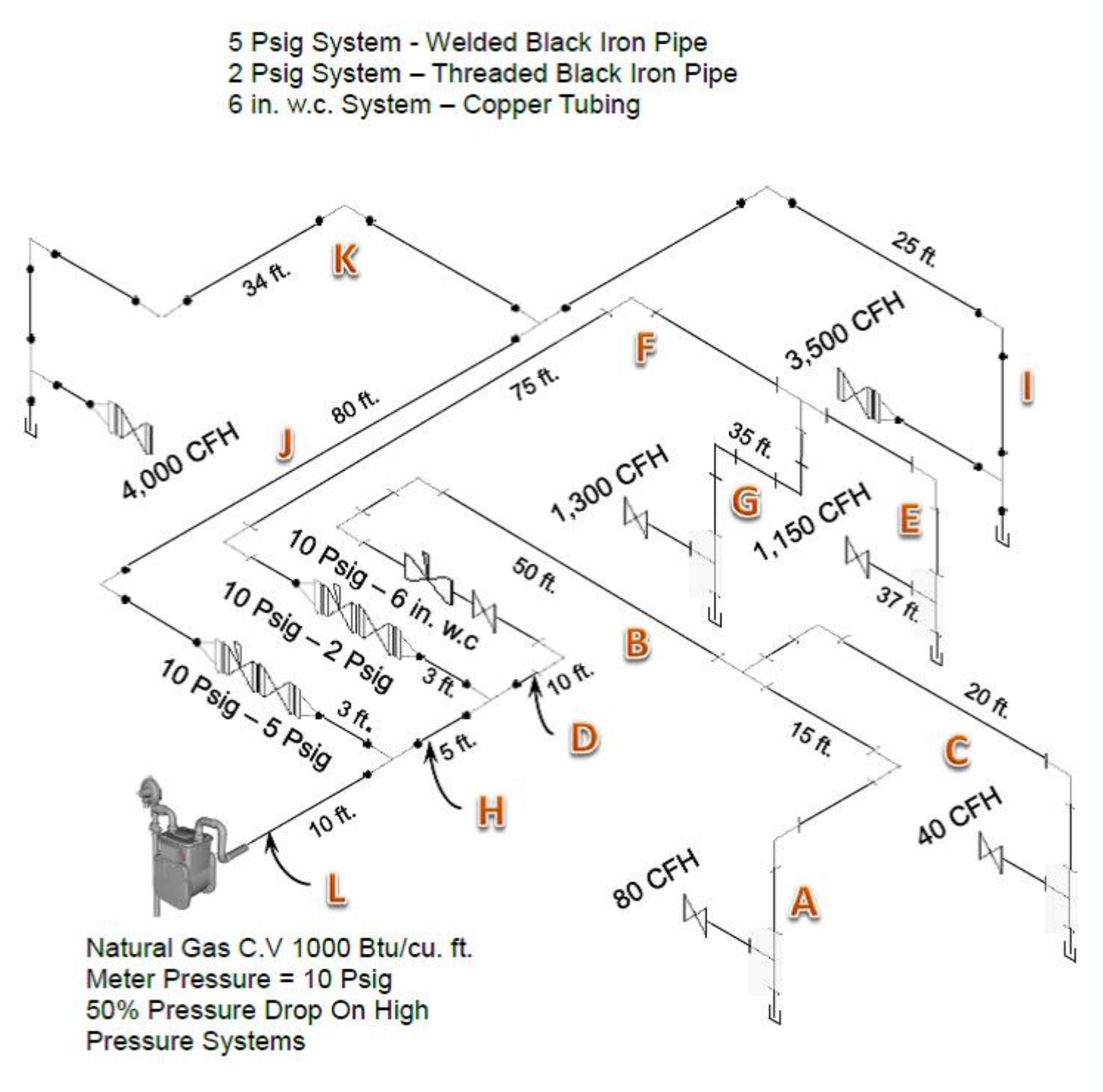
d.
69 feet

Feedback

Your answer is incorrect.

The correct answer is: 97.94 feet

Question text



Referring to the pipe sizing drawing the code zone required to size the pipe section B is which one of the following code zones ?

Select one:

a.
15 feet

b.
70 feet

c.
20 feet

d.

65 feet

Feedback

Your answer is incorrect.

The correct answer is: 70 feet

Question text

Referring to the pipe sizing drawing the diameter of the pipe section B is which one of the following pipe (tubing) sizes ?

Select one:
a.
1/2 inch

b.
7/8 inch

c.
1 1/8 inch

d.
3/4 inch

Feedback

Your answer is incorrect.

The correct answer is: 1 1/8 inch

Referring to the pipe sizing drawing the diameter of pipe section C is which one of the following pipe size ?

Select one:
a.
7/8 inch

b.
1/2 inch

c.
3/4 inch

d.
1 1/8 inch

Feedback

Your answer is incorrect.

The correct answer is: 3/4 inch

Question text

Referring to the pipe sizing drawing the 2 PSIG piping system is sized on which one of the following code zones ?

Select one:
a.
150 feet

b.
112 feet

c.
125 feet

d.
110 feet

Feedback

Your answer is incorrect.

The correct answer is: 125 feet

Question text

Referring to the pipe sizing drawing the diameter of pipe section G is which one of the following pipe sizes ?

Select one:
a.
3/4 inch NPS

b.
1 inch NPS

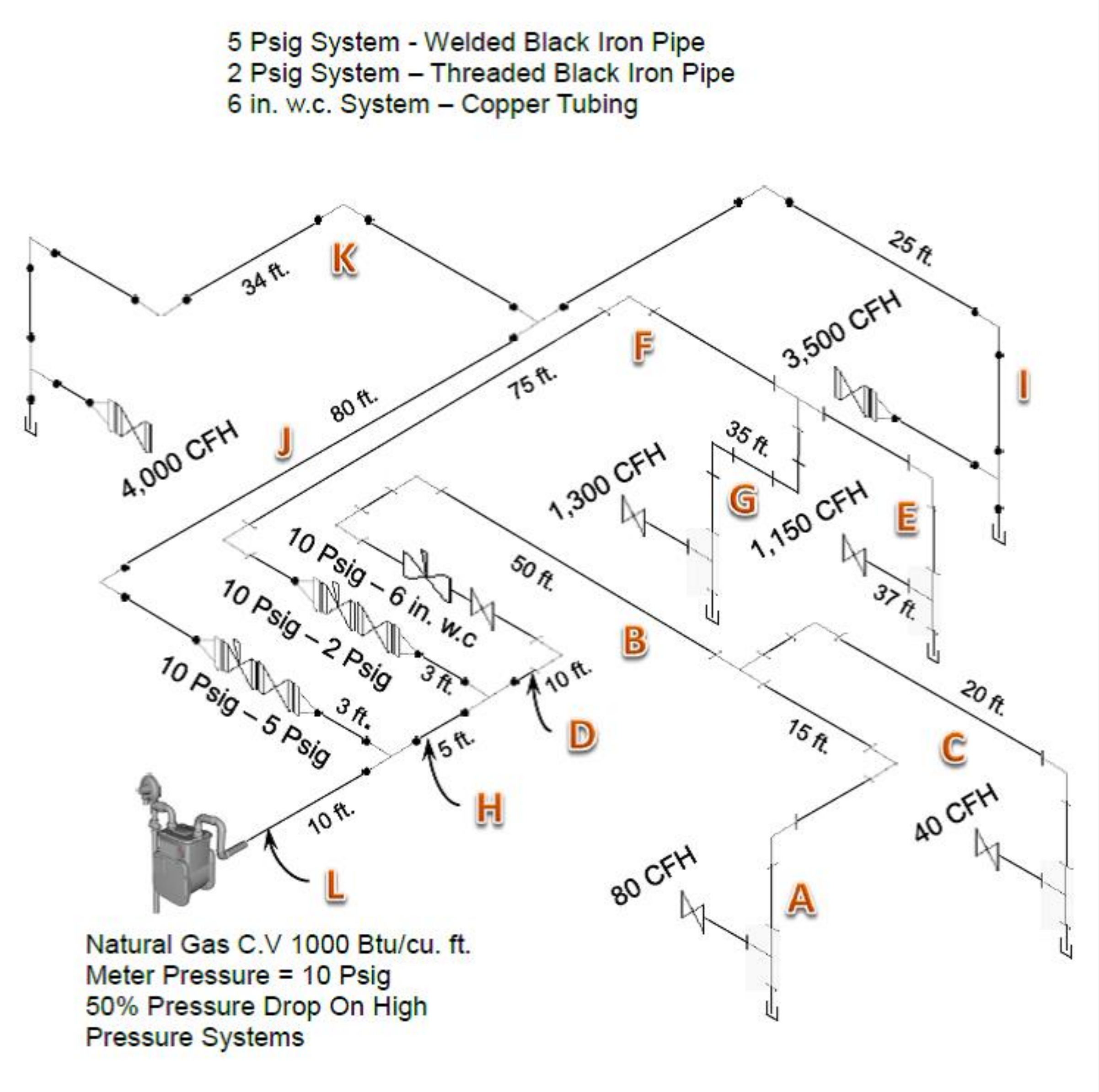
c.
1 1/4 inch NPS

d.
1/2 inch NPS

Feedback

Your answer is incorrect.

The correct answer is: 1 inch NPS



5 Psig System - Welded Black Iron Pipe
2 Psig System – Threaded Black Iron Pipe
6 in. w.c. System – Copper Tubing

Natural Gas C.V 1000 Btu/cu. ft.
Meter Pressure = 10 Psig
50% Pressure Drop On High
Pressure Systems

Referring to the pipe sizing drawing the diameter of pipe section F is which one of the following pipe sizes ?

Select one:

a.
3/4 inch NPS

b.
1 inch NPS

c.
1 1/4 inch NPS

d.

1 1/2 inch NPS

Feedback

Your answer is incorrect.

The correct answer is: 1 1/4 inch NPS

Question text

Referring to the pipe sizing drawing the diameter of pipe section I is which one of the following pipe sizes ?

Select one:
a.
1 1/2 inch NPS

b.
2 inches NPS

c.
1 1/4 inch NPS

d.
1 inch NPS

Feedback

Your answer is incorrect.

The correct answer is: 1 1/4 inch NPS

Question text

Referring to the pipe sizing drawing the diameter of pipe section K is which one of the following pipe sizes ?

Select one:
a.
1 inch NPS

b.
2 inches NPS

c.
1 1/4 inch NPS

d.
1 1/2 inch NPS

Feedback

Your answer is incorrect.

The correct answer is: 1 1/4 inch NPS

Question text

Referring to the pipe sizing drawing the diameter of pipe section J is which one of the following pipe sizes ?

Select one:

a.
1 1/4 inch NPS

b.
2 inches NPS

c.
1 inch NPS

d.
1 1/2 inches NPS

Feedback

Your answer is incorrect.

The correct answer is: 1 1/2 inches NPS

Question text

Referring to the pipe sizing drawing the longest length of equivalent run (measured length plus fitting allowance) in the 5 PSIG system is closed to which one of the following length ?

Select one:

a.
135 feet

b.
121 feet

c.
118 feet

d.
105 feet

Feedback

Your answer is incorrect.

The correct answer is: 135 feet